Fairness Perceptions and Compliance Behaviour: Taxpayers' Judgments in Self-Assessment Environments

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Abstract

This cross cultural study compares the fairness perceptions of New Zealand and Malaysian individual taxpayers of their respective income tax systems, and investigates the consequences of those perceptions, together with other important variables, on their compliance behaviour. A theoretical framework was developed based on Equity Theory and the Theory of Planned Behaviour. The study's hypotheses were tested using the responses to questionnaire surveys (which included two scenarios) and in-depth telephone interviews, which were conducted sequentially in both countries. Partial Least Squares and thematic analysis were used to analyse the surveys and interviews data, respectively.

The results suggest that Malaysian taxpayers have significantly better perceptions of fairness of their income tax systems than their New Zealand counterparts, yet New Zealand taxpayers are more compliant. The most consistently important factor in explaining taxpayers' compliance behaviour across the two countries is their attitude towards compliance, followed by subjective norms. Fairness perceptions, which are highly influenced by their tax knowledge and perceived complexity of the tax system, are also influential, particularly in the understating other incomes scenario. This cross-cultural study demonstrates that regardless of the differences between the two countries under study (in relation to

economies, cultures and ethnicities), taxpayers generally respond in quite similar ways when it comes to meeting their tax obligations.

Chapter 1

Introduction

1.1 Overview of the Thesis

The issue of tax fairness has received great attention around the world. Tax fairness is essential because tax systems should be perceived as fair in order to obtain a high degree of voluntary tax compliance. In other words, a good understanding of taxpayers' fairness perceptions is important for the tax authority to improve the tax system and consequently encourage taxpayers' compliance. Thus, this cross-cultural study on fairness perceptions between New Zealand and Malaysia is undertaken to provide such an understanding in two relatively rarely examined jurisdictions, both of which rely on self assessment.

It is worth conducting this comparative study of Malaysia against the New Zealand benchmark for several reasons. First, New Zealand, a developed country, is an early implementer of the self assessment system while Malaysia, a developing country has experienced a more recent move to the self assessment system. Comparing these two countries (of different years of experience with the system) would be interesting to discover any differences in fairness perceptions and compliance behaviour among their individual taxpayers. Second, the fact that New Zealand tax system is seen

to be one of the most efficient tax systems internationally (OECD, 2007), and the second highest compliance nation after Singapore (Belkaoui, 2004) further justifies the need to undertake this cross-cultural study. In that review of thirty countries, Malaysia was ranked eighth, after the United States (US). It is interesting to investigate whether the two nations of different level of compliance behaviour (as suggested by Belkaoui, 2004) have similarities or differences in their fairness perceptions on their respective income tax systems; and whether such fairness perceptions are consistent with their compliance behaviour.

Third, the concerning level of non-compliance behaviour in these two countries, especially in Malaysia provides rationale to investigate taxpayers fairness perceptions and their effects on compliance behaviour. This information is important especially for the tax authorities in their effort to improve the current income tax systems.

Fourth, the economic and cultural differences between the two countries may provide interesting perspective to the cross-cultural studies. New Zealand, which is an example of a developed nation, is highly populated with European (68%), Maori (15%) and Asian (9%). While Malaysia, which represents a developing country, consists of five major ethnic groups namely Malays, Chinese, Indians, Kadazans and Ibans. These differences have led to national cultural differences between the countries as suggested

by Hofstede (2001). Referring to his model on cultural dimensions, New Zealand is regarded as an individualistic society, which emphasises on individuality and individual rights. Malaysia, on the other hand, is characterised as a collective society where closer ties between individuals are apparent. Another distinct feature between the two nations, as identified by Hofstede (2001) is the power distance dimension, where the society in New Zealand stresses in equality and opportunity for everyone. This is not the case in the Malaysian society, where inequalities of power and wealth have been allowed to grow.[1] While these cultural differences (which may affect societal norms) are not directly tested in this study, they may have an impact of fairness perceptions and compliance behaviour.[2]

Finally, the use of New Zealand and Malaysian data would give an excellent basis to compare with other Asian countries in the future (for example, Hong Kong and Singapore).

This study begins with general overview on the tax fairness issue, tax compliance behaviour, as well as the background of the income tax systems implemented in New Zealand and Malaysia. These discussions provide the path for the researcher to discuss the relevant theories and prior

[1] The other two dimensions of national culture are masculinity and uncertainty avoidance. However, the differences between the nations in these two dimensions are not apparent.

studies. Since fairness and compliance behaviour are the central issue in this study, both Equity Theory and the Theory of Planned Behaviour (TPB)[3] are discussed in order to provide a comprehensive picture of how taxpayers perceived the fairness of the respective income tax systems, which consequently affects their compliance behaviour (Bordignon, 1993; Loo & McKerchar, 2010; Richardson, 2005; Turman, 1995). The integration between Equity Theory and the TPB is appropriate for two reasons. First, fairness perceptions are only one factor that may affect taxpayers' compliance behaviour. Second, the TPB has been established as a dominant theory in explaining individuals' behaviour. Prior studies, which have been mainly undertaken not in New Zealand and Malaysia, have also been reviewed to develop the relevant hypotheses.

Generally the scope of this study is individual taxpayers in both New Zealand and Malaysia. In order to obtain that selected group of taxpayers, a different sample selection basis was performed depending on the availability and accessibility of the data. In New Zealand the 2008 Electoral Roll was used to systematically select the potential respondents. In Malaysia the sampling frame was carried out through public entities and private entities engaging in service industry. Due to the different sampling

[2] Even though the study does not explicitly test the impact of cultural differences on fairness perceptions and compliance behaviour, it does take into account subjective norms as one hypothesised variable. Thus, indirectly the model captures the cultural differences to a certain degree.

frame, it is important to note that the term 'taxpayers' in this study is limited to salary and wage earners in Malaysia and a more diverse group of individual taxpayers (including salary and wage earners, self-employed and tax beneficiaries) in New Zealand.

The fourteen theoretically derived hypotheses (plus 3 sub-hypotheses) are then tested based on respondents' answers to the survey questionnaire, using Partial Least Squares (PLS) software. In the survey, individual taxpayers were asked about different dimensions of fairness, their knowledge on the respective income tax systems and the perceived complexity of their income tax systems. Also, an attempt was made to identify their compliance motivations (based on the TPB variables) using two hypothetical tax scenarios, one related to overstating business expenses, and the other on understating other incomes. In addition to the quantitative approach, in-depth interviews were also conducted to gather more information. This mixed-method approach enabled the researcher to provide comprehensive findings to the study.

From the analysis (both surveys and interviews), the results indicate that taxpayers in both New Zealand and Malaysia perceived tax fairness to be multi-dimensional. While the interview results in both New Zealand and

[3] While there are other behavioural theories available, these two theories were found to be most relevant to capture fairness perceptions and taxpayers' compliance behaviour.

Malaysia consider fairness perceptions as an important factor in taxpayers' compliance decisions, the survey results suggest that such a significant role is only apparent in the 'understating other incomes' scenario. Taxpayers' attitudes and subjective norms appear to have greater impact on their compliance behaviour. Further, the results indicate that both tax knowledge and low level of tax complexity positively contribute to fairness perceptions. This has important implications for tax authorities in educating taxpayers on the importance of tax and the distribution of tax revenues collected; and at the same time simplifying their income tax systems.

The remainder of this chapter is organised as follows: first, it sets out the issues regarding fairness in the tax compliance decisions. This is followed by an overview of the implementation of the income tax systems and compliance levels in both New Zealand and Malaysia. This discussion is followed by a description of the two main approaches in tax compliance studies, namely the economic deterrence approach and the behavioural approach. Then, the significance of the study is set out. This is followed by outlining the objectives of the study. The chapter ends by an overview of the research framework, research methodology and methods adopted to conduct the study.

1.2 Problem Statement

Fairness perceptions are important in individuals' private and public lives. Equality, justice and social change all have their roots in perceptions of fairness. If individuals perceive a system or situation to be fair, they will generally support the system and demonstrate this support through their actions. The impact of perceived fairness has been established by political psychologists who claim that citizens make political evaluations based on fairness perceptions (Lind & Tyler, 1988; Rasinski & Tyler, 1988).

In taxation, fairness perceptions have been discussed widely internationally and have been seen as a prerequisite for taxpayers' compliance. In fact, there is ample overseas evidence documenting the role of tax fairness in the tax system. Etzioni (1986), for example, concludes that fairness perceptions of tax are more important than the tax rate itself in influencing compliance behaviour. A study by Bordignon (1993) further documented that fairness has an important influence on taxpayers' compliance behaviour.

Undeniably tax fairness[4] is one important element of an efficient tax system. The Institute on Taxation & Economic Policy (2005) claims that tax fairness is an important goal for state policy makers to encourage tax compliance. Furthermore, tax reform was enacted in the United States (US) in 1997 (known as the Tax Reform Act (TRA) 1997) to improve a tax

system which had been criticised as being complicated, unfair and easily manipulated (Bobek, 1997). As part of this reform, the Inland Revenue Service (IRS) Restructuring and Reform Act of 1998 was enacted (Nellen, 1999) where various incentives were offered with the intention of reducing the burden of low and middle income taxpayers. Other changes in that Act included a shift of the burden of proof from taxpayers to the IRS, protection for confidential communications between taxpayers and their tax agents, an increase in taxpayers' rights, particularly during tax audits, and taxpayers' rights to civil damages if the IRS acts negligently with respect to tax compliance (Nellen, 1999). It is interesting to note that the focus of this reform was tax simplification embedded within the concept of fairness.

Realising the importance of the fairness criterion, the New Zealand Government has also continuously given attention to this issue through numerous reforms (Tan, 1998; Tax Review, 2001). For instance, between 1984 and 1990, the New Zealand Government reduced the top marginal tax rate from 66 percent to 33 percent, and the number of tax brackets from five to three (Stephens, 1993; Tax Review, 2001). In 1986, sales taxes were abolished and replaced with a Goods and Services Tax (GST) with a uniform tax rate of 10 percent (which was subsequently raised to 12.5

[4] A detailed discussion of tax fairness is offered in Chapter 2.

percent in 1989 and 15 percent in 2010) (Brash, 1996; Government of New Zealand, 2010; Stephens, 1993).

Domestically, the implementation of a self assessment system (SAS) in Malaysia was also embedded with the objective of instilling public confidence in the fairness and integrity of the tax system (Palil, 2005). Prior to the implementation of the SAS, Malaysian tax authority has reduced the top marginal tax rate from 55 percent (1980 to 1984) to 40 percent (1985 to 1990), with fifteen tax brackets (Singh, 2003). Thereafter, a gradual reduction in the top marginal tax rate has taken place over time from 35 percent in 1991 (Singh, 2003) to the current rate of 26 percent in 2010, with twelve tax brackets (Inland Revenue Board of Malaysia, 2010).

The effort taken by the New Zealand and Malaysian Governments, and their respective Revenue Authorities, signals that tax fairness is a central issue in taxation. Empirical evidence on the positive association between tax fairness and tax compliance in previous studies (for example, Gilligan & Richardson, 2005; Roth et al., 1989; Turman, 1995) has also established that the lack of fairness in income tax systems may explain non-compliant behaviour. Consequently, it is worth conducting a further comparative study on tax fairness in income tax systems, bearing in mind the significant effect fairness has on compliance decisions.

1.3 Overview of the Income Tax Systems and Compliance Environment

This section provides an overview of the income tax system, as well as compliance levels, in both New Zealand and Malaysia. This information is essential to understand the current implementation of the income tax systems in the countries under review.

1.3.1 New Zealand

The New Zealand income tax legislation was first enacted in 1891 through the Land and Income Tax Assessment Act 1891. The applicable tax rates at that time were set at sixpence for a pound (two-and-a-half percent) on taxable income up to £1,000, after an initial £300 exemption, and one shilling for a pound (five percent) for the remaining balance (Committee of Tax Experts, 1998). These two-steps tax scale was adopted until 1911, when the number of steps were subsequently increased to nine in 1911 (Vosslamber, 2009). This change was only effective until 1913 when a graduated income tax was introduced in 1914. In 1941, the tax system returned to the step system of taxation with 39 steps (Vosslamber, 2009). The number of steps has changed a number of times (for details, see Stephens, 1993; Vosslamber, 2009) to settle to two steps in 1990 with a top rate of 33 percent, the lowest in the Organisation for Economic Cooperation and Development (OECD) at that time (Stephens, 1993). Lowering the income tax rate (from 66 percent to 33 percent) reduced the

share of personal income tax from 64 percent of total tax revenue in 1984 to 49 percent in 1990. To balance with that, fringe benefits tax (FBT), goods and services tax (GST) and resident withholding tax on interest and dividend income were introduced in 1985, 1986 and 1989, respectively (Brash, 1996). In addition, over time, exemptions for low income earners were also abolished, leaving the New Zealand tax system with no tax-free threshold.

Recently, the 2010 Budget also focused on achieving a fairer and more sustainable tax system. In order to accomplish this objective, lower personal income tax rates have been introduced, with a minimum of 10.5 percent to the maximum of 33 percent (the previous minimum and maximum tax rates were 12.5 and 38 percent, respectively). These new tax rates take effect from 1 October 2010 (Government of New Zealand, 2010). In order to fund the tax revenue reduction as a result of lowering the income tax rates, the rate for GST is increased from 12.5 percent to 15 percent. This tax package which aims to broaden the existing tax bases is considered the most thorough and beneficial overhaul of the income tax system in 25 years (Government of New Zealand, 2010).

The above discussion suggests that numerous reforms have been made to improve the tax system and deal with an increasingly complex environment (Stephens, 1993; Tan, 1998; Tax Review, 2001). Following

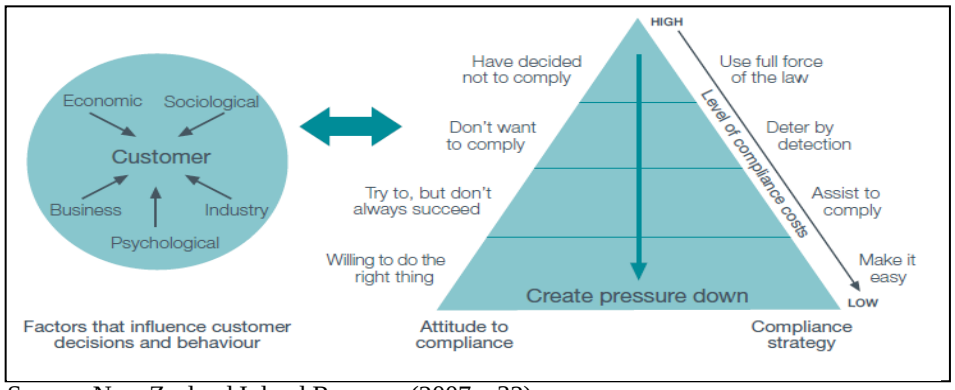
these reforms, the OECD regarded the New Zealand tax system as one of the most efficient tax systems internationally (OECD, 2007). New Zealand is the country with the second highest level of tax compliance (with a score of 5.0) after Singapore (Belkaoui, 2004).[5] In his study, Belkaoui (2004) measures tax compliance using the level of tax compliance index that varies from 0 to 6.0, with higher scores indicating higher compliance.

Like many other jurisdictions, New Zealand also relies on a voluntary compliance tax system,[6] where taxpayers are expected to understand and comply voluntarily with their tax obligations (Committee of Tax Experts, 1998). Under this voluntary self-assessment system, some taxpayers are prone to non-compliance (both intentional and unintentional). Hence, the Inland Revenue Department (IRD) has taken a proactive stance to maintain high levels of tax compliance, through its Compliance Model (New Zealand Inland Revenue, 2007), as exhibited in Figure 1.1.

[5] Malaysia is ranked eight out of 30 countries (Belkaoui, 2004).

[6] A SAS has been formally in place in New Zealand since 1998.

Figure 1.1
The IRD Compliance Model



Source: New Zealand Inland Revenue (2007, p32)

The IRD's Compliance Model (based on the Australian Tax Office's (ATO's) Compliance Model) (Inland Revenue Department, 2003), which is designed to facilitate compliance amongst the vast majority of taxpayers, takes into consideration the external factors (economic, sociological, business, industry and psychological) that influence taxpayers' attitudes and behaviours. Once the determining factors are recognised, the most suitable approach is applied to the best way possible to improve compliance. The Compliance Model also details the strategies to improve compliance according to a variety of compliance attitudes. For example, if taxpayers are either "willing to do the right thing" or "try to comply but do not always succeed", the IRD's approach is to make compliance easy and assist them to comply. This strategy will minimise unintentional non-compliance among taxpayers. At the 'high' end of the compliance spectrum, where people deliberately do not comply, 'suitable' sanctions are

required.[7] In this situation, law enforcement is important to maintain overall taxpayers' confidence in the tax system and encourage ongoing tax compliance (New Zealand Inland Revenue, 2007).

Notwithstanding the benefits of the IRD's Compliance Model, which emphasises on the dynamic partnership between the tax authority and the taxpayers towards improving tax compliance, Kornhauser (2007) believes that this model poses several problems. First is the possibility of being too lenient and too hard which can decrease tax compliance by eroding tax morale. The second problem with this flexible system is the tendency to undermine a sense of procedural fairness when the tax authority's discretion creates arbitrary decisions. This has potential to lower tax morale and consequently tax compliance. Third is the assumption that taxpayers' attitudes or motivations are reflected in their behaviour and therefore tax authority simply responds according to that behaviour. She contends that this assumption may not always hold true as attitudes do not necessarily translate into behaviour. Also, the fact that taxpayers with different attitudes and motivations may behave in the same manner further requires the tax authority to understand taxpayers' attitudes and motivations rather than actual behaviour per se in their effort to improve tax morale and consequently tax compliance.

[7] This strategy will help to curb deliberate non-compliance behaviour among taxpayers.

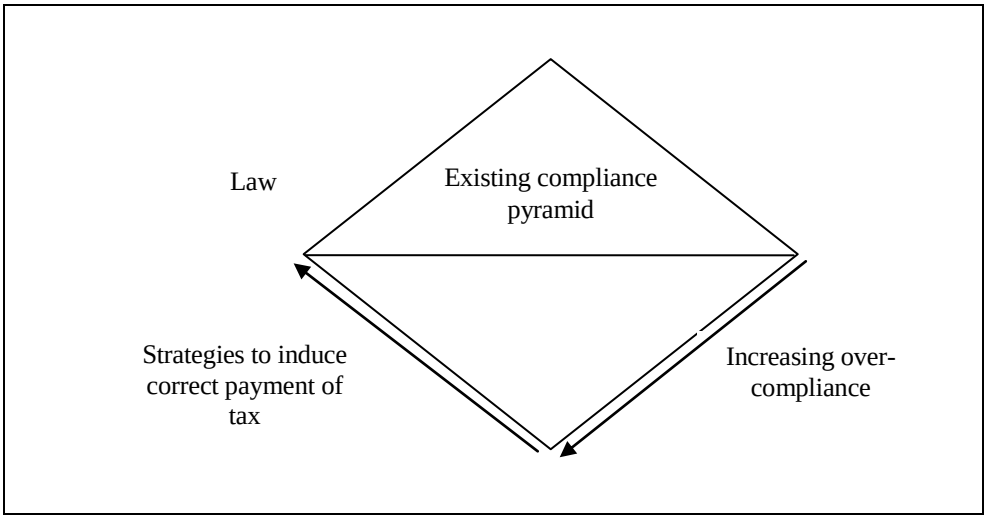
Burton (2008), on the other hand, criticises the 'pyramid model' on the basis that it is focusing upon taxpayer under-compliance alone while ignoring over-compliance. Further, he claims that such a model does not fit the non-compliance definition which entails both under-payment and over-payment of taxes. By ignoring over-compliance, the tax authority has actually 'enjoyed' the advantage of having more revenue collected, as reported in the US and Ireland (Burton, 2008). This scenario also exists in New Zealand where NZ$73,135,998 of overpaid tax by 50,392 taxpayers was reported in 2006 (Stock, 2007). In 2005, the IRD owed NZ$51,035,315 in overpaid tax to 37,201 taxpayers. In total, the IRD has collected NZ$700 million in overpaid tax, since the year 2000 to 2006 (Stock, 2007).[8] This indicates the unfair treatment to over-compliant taxpayers.

In response, Burton (2008) suggests a 'diamond model' of compliance to replace the 'pyramid model', as exhibited in Figure 1.2. This 'diamond model' serves to tackle both under-compliance (represented by the upper-half of the diamond) and also over-compliance (represented by the lower-half of the diamond). While the strategies to encourage compliance among the under-compliant taxpayers are similar to the existing compliance 'pyramid model', Burton (2008) suggests a risk assessment analysis to determine the category of taxpayers who overpay and the reason for their

[8] However, the amounts refunded to taxpayers are not publicly known.

overpaying, in order to apply appropriate strategies in inducing correct payment of tax among the over-compliant taxpayers. The adoption of a 'diamond model' is believed to enhance taxpayers' fairness perceptions (particularly on administrative fairness) and consequently improve compliance behaviour (Burton, 2008).[9]

Figure 1.2
A Compliance Diamond Model



Source: Burton (2008, p5)

The success of the Compliance Model is evidenced in part through the tax collected for the period 2004-2008 in New Zealand. Tax revenue over this period shows a gradual increase from NZ$42 billion in 2004-05 to NZ$51.2 billion in 2007-08 (refer Table 1.1). However, it is important to note that the increment may also be attributable to other factors like the increase in wealth of taxpayers and changes in the tax levels, (through

[9] A more complex compliance model introduced by Burton (2008) is a 'cube model' which takes into account the risk/benefit and individual taxation issues.

bracket creep), of the New Zealand taxpaying population. For example, it is reported that the median annual personal income was NZ$24,400 in 2006 (Statistics New Zealand, 2006) compared to only NZ$18,965 in 2004 (Statistics New Zealand, 2005).[10] This increase of approximately 25 percent will have had a positive impact on the amount of tax collected. The statistics also highlight the increase in the number of people receiving income in the band between NZ$50,000 to NZ$70,000, from six percent in 2001 to 10 percent in 2006 (Statistics New Zealand, 2006).

Another possible explanation for the increase in tax collected is national economic growth. Even though New Zealand was expected to face a difficult year in 2006, the country has seen economic growth of slightly more than five percent from 2004 to 2007 (Mussa, 2007). The growth would justify the higher collection of tax in addition to the successful implementation of the Compliance Model itself.

Table 1.1
Composition of Actual Revenue Assessed

Year	Direct Taxes (NZD Billion)	Indirect Taxes (NZD Billion)	Total (NZD Billion)
2004-05	32.8	9.2	42.0
2005-06	37.3	9.5	46.8
2006-07	38.5	10.1	48.6
2007-08	41.3	9.9	51.2
2008-09	38.6	10.4	49.0

Source: New Zealand Inland Revenue (2007, 2009)

[10] While it would be more appropriate in this thesis to compare the 2004 figure to at least the 2009 statistics, currently the 2006 year figures are the latest statistics publicly available.

In 2008-09, however, there was a decrease in tax collected to NZ$49.0 billion compared to the previous year of NZ$51.2 billion. Such a decline was mainly due to the major changes related to company taxation and other indirect taxation (New Zealand Inland Revenue, 2009). The global financial crisis, which began in 2007 in the US, may also explain part of this decline. For instance, Jensen (2008) claims that the consequences of the global recession only began to reveal its major impact in New Zealand in 2008, where its Stock Exchange Index had dropped 37 percent since May 2007. During the same year, the New Zealand dollar also fell by 35 percent against the US dollar, and foreign investors and businesses withdrew their investments (Jensen, 2008). A survey among New Zealanders also revealed that 60 percent were under financial distress due to the global financial crisis (Guha, 2010). The crisis resulted in the sudden collapse of finance companies, significant loss in wealth among investors and a rise in the unemployment rate. These problems have lead to high levels of household debt, inadequate savings and an uncertain retirement prospect for New Zealanders (Guha, 2010). Referring to the consequences of the financial crisis, it was no surprise for the IRD to record a lower tax collection in 2008-09 and a rise in tax debt.

In addition to the above, another potential explanation of lower tax collection in 2008-09 could be the problem of voluntary tax compliance itself. This is partly evidenced by the number of taxpayers who were

required to file tax returns but did not submit their return forms in a timely manner in the past three years. The IRD's Annual Report claims that 18 percent of individual taxpayers did not submit their tax return forms promptly both in the 2004-05 and 2005-6 years (New Zealand Inland Revenue, 2006), and the percentage rose to 22 percent in the 2006-07 year (New Zealand Inland Revenue, 2007).[11]

One might argue that the figures might be misleading since the possible reason for not filing the return forms is that some taxpayers may not have had any income with no or insufficient tax deducted at source and hence did not need to file a return. This view can be argued based on the research undertaken by the IRD in the 2006-07 year (New Zealand Inland Revenue, 2007). This research, which was carried out on 500,000 filing returns and taxpaying events between 2001-2005 years, showed the following preliminary results:

(1) 83 percent of the returns complied, with the majority completing relevant filing and tax paying obligations;
(2) nine percent of returns had a moderate level of compliance issues; and
(3) eight percent demonstrated poor levels of compliance.

These findings indicate that at least 17 percent of individual taxpayers in New Zealand have not fully complied (to some degree) with their

[11] Although the Annual Reports for 2008 and 2009 are currently available, information regarding the non submission of return forms is not provided.

obligations under the tax system.[12] It is important to note that this research focuses on taxpayers who have some choice about compliance, and excludes taxpayers who are solely employees and have tax deducted at source through the Pay As You Earn (PAYE) system (New Zealand Inland Revenue, 2007).

Undeniably, the IRD's compliance strategy, as represented by the IRD Compliance Model (and the IRD's audit approach), has been particularly fruitful in identifying tax discrepancies. For instance, in the 2006-07 year, the IRD successfully prosecuted 705 taxpayers for failing to file return forms. In addition, assessments worth NZ$716 million were raised by the IRD in the absence of returns filed by taxpayers. Another NZ$128 million was identified as discrepancies due to tax evasion. In this period, to discover such non-compliance behaviour, IRD officers have used their powers (under Sections 16 to 19 of the Tax Administration Act 1994)[13] 632[14] times to obtain information, including accessing private property, requesting accounts and documents, and even carrying out enquiries before the District Court (New Zealand Inland Revenue, 2007).

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[12] The percentage could be higher since the research results clearly stated that most taxpayers (83 percent) complied with the majority of their filing and paying obligations but not fully complying.

[13] The use of these sections is subject to restrictions in Section 20 and Sections 20B to 20G of the Tax Administration Act 1994.

[14] In the 2005-06 year, the IRD has used its information gathering powers 815 times (New Zealand Inland Revenue, 2007).

Following tax audits in the 2007-08 year, prosecutions were successfully made against 563 taxpayers who failed to file their income tax returns (New Zealand Inland Revenue, 2008a). Additionally, assessments worth NZ$740 million were raised (with a minor increase) compared to NZ$716 million in the previous year. During the same year, tax discrepancies relating to tax avoidance and evasion to the value of NZ$75 million were also discovered.[15] While in the 2007-08 year a huge reduction in tax discrepancies in terms of tax evasion was reported, compared to the previous year, the most recent data reported in the Annual Report of New Zealand Inland Revenue (2009) indicates an increase of more than 60 percent of discrepancies (NZ$123 million), compared with the prior year (NZ$75 million). However, the Annual Report (2009) also indicates a decrease in the number of prosecutions (354 individual taxpayers), as well as the amount of additional assessments raised (NZ$640 million).

Table 1.2 summarises the key data indicating the 'success'[16] of the compliance strategy implemented by the IRD for the period of 2004-05 to 2008-09. The comparison, particularly in respect of tax discrepancies due

[15] It is important to note that not all tax avoidance is non-compliance but an aggressive interpretation of the Revenue Acts may be non-compliance. The New Zealand tax legislation permits arrangements to minimise tax liability but the Commissioner of the Inland Revenue reserves the right to make adjustments where necessary, to counteract a tax advantage obtained by the person from the arrangement under Sections BG 1 and GA 1(2) of the Income Tax Act 2007, and also for GST under Section 76 of the Goods and Services Tax Act 1985.

[16] In this instance, the 'success' of the compliance strategy is measured based on the gradual increase in the amount of additional assessments raised and the amount of tax discrepancies discovered.

to tax evasion between the 2007-08 and 2008-09 years, reveals that the non-compliance appears to be slightly higher in the last year.

An interesting question is whether the trend signals that the IRD's efforts are more fruitful through careful audit selection and targetting, or non-compliance behaviour is increasing, or is the amount of non-compliance increasing but the number of taxpayers involved decreasing?

Table 1.2
Statistics on Non-Compliance from 2004-05 to 2008-09

Year	Number of Prosecutions on Individual Taxpayers	Assessments Raised due to Absence of Returns (NZ$ Million)	Tax discrepancies due to Tax Evasion (NZ$ Million)	Power Used to Obtain Information
2004-05	886	564	75.9	506
2005-06	957	670	72	815
2006-07	705	716	128	632
2007-08	563	740	75	Data not available
2008-09	354	640	123	Data not available

Source: New Zealand Inland Revenue (2007; 2008a; 2009)

The above discussion indicates that New Zealand is experiencing ongoing non-compliance tax behaviour. Despite the high amount of tax collected (as indicated in Table 1.1), the amount of discrepancies due to tax evasion (refer Table 1.2) revealed by tax audits, is also high. This suggests that the use of the Compliance Model contributes to increasing levels of tax collection through focussed tax audits, but not to the same level of promoting voluntary compliance. For instance, from the 2004-05 to 2007-08 years, the amount of tax collected has been gradually increasing as well

as the number of additional assessments. It is important to note that these additional assessments were raised due to the absence of returns made by the taxpayers. Also, the statistics extracted from the IRD's Annual Reports provide support to Caragata (1998), who reported that the estimated tax gap has increased substantially from NZ$82 million in 1969 to NZ$3.2 billion in 1994. In his report, Caragata (1998) estimates the tax gap, being the amount of tax that theoretically could be collected from tax evaders under the existing law. This figure has increased further to NZ$3.9 billion in 2001 (Davidson, 2005). Thus, in the researcher's view, this situation indicates that the issue of voluntary tax (non)compliance among taxpayers in New Zealand is still a very relevant concern.

1.3.2 Malaysia

Generally, there are two main bodies administering the tax laws in Malaysia, that is the Inland Revenue Board (IRB) and the Royal Customs and Excise Department (the Customs). The IRB is responsible for the enforcement of the tax laws relating to income tax, petroleum income tax, real property gains tax (RPGT),[17] stamp duty and estate duty. In addition to this, the IRB is also responsible for collecting withholding tax on payments made to non-residents relating to interest, royalties, contract payments, special classes of income (such as fees for technical advice) and income in

[17] The RPGT was repealed in 2007 but re-enacted in 2010 (MIDA, 2010).

respect of services performed by a public entertainer.[18] The Customs, on the other hand, administers customs duties (import and export duty), excise duty, service tax and sales tax. These existing service and sales taxes will be abolished and replaced by Goods and Services Tax (GST) in 2011 at a proposed rate of 4 percent (Kok, 2010).

The income tax system in Malaysia commenced in 1948 while it was under British colonisation. It was introduced to legitimise the collection of taxes from individuals and corporations. Since its inception, Malaysia had adopted an official assessment system (OAS) which requires taxpayers to furnish relevant information pertaining to their incomes and expenses to the Inland Revenue Board (IRB). Under that system, the duty to compute the tax payable was with the IRB, as taxpayers were assumed to have limited knowledge on taxation.

However, with effect from 2001,[19] a SAS was gradually implemented. Under the new system, the responsibilities to compute tax payable shifted from the IRB to taxpayers. Unlike an OAS, a SAS requires taxpayers to be well-versed with the existing tax laws and provisions, since they are answerable to the tax authorities in the case of a tax audit. Another prominent attribute of the SAS is voluntary compliance, as the tax returns

[18] The rate varies from 5 percent to 15 percent depending on the types of income.

submitted by taxpayers are deemed to be their notice of assessment. In other words, penalty mechanisms will be applied if taxpayers do not submit a correct tax return within the stipulated period. The penalty includes the initial late payment penalty of 10 percent and a further 5 percent if failed to pay within sixty days from the date the first penalty is imposed (Inland Revenue Board of Malaysia, 2010).

Subsequent to the full implementation of SAS in 2005, the IRB has successfully raised taxes of MYR56.85 billion (NZ$25.82 billion) in direct taxes.[20] This amount is 17.6 percent higher than the Government's revised estimate of MYR48.35 billion (NZ$21.96 billion) for the year 2005 (refer Table 1.3). The IRB Chairman claims that the IRB has never collected such a large amount before (Inland Revenue Board of Malaysia, 2005). At a glance, this provides some evidence that the shift from an OAS to a SAS made by the IRB is 'financially rewarding'. However, the Chairman further noted that the rise in tax collected is also attributable to favourable national economic conditions, with Gross Domestic Product (GDP) growing by five percent in 2005, which in turn creates a conducive climate for all sectors in the Malaysian economy.

[19] SAS was implemented in stages, beginning with companies in 2001, followed by non-companies in 2004, and was fully put into practice in 2005.

Furthermore, there was an increase in global crude oil prices from US$41 per barrel (NZ$65.6) at the beginning of 2005 to US$60 per barrel (NZ$95.9) at the end of the year (Inland Revenue Board of Malaysia, 2005).[21] The increment in crude oil prices would have had a positive impact on the collection of petroleum income tax, as Malaysia is a major crude oil producer. Similarly, 2005 has also recorded an increase in real property business, and consequently an increase in the real property gains tax compared to 2004.[22] For example, the sale of residential properties with the price of MYR250,000 (NZ$113,523) and above, climbed from 19 percent in the first six months in 2004, to 32 percent in 2005 for the first six months (Ministry of Finance Malaysia, 2006). The growth is a result of a better economic climate, higher household incomes, attractive financial packages and favourable interest rates compared to previous years.

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[20] Direct taxes comprise company income tax, petroleum income tax, individual income tax, cooperative income tax, stamp duty, real property gains tax (RPGT), withholding tax, International Offshore Financial Centre (IOFC) tax and other taxes.

[21] The conversion rate is based on average annual conversion rate in 2009 obtained from http://www.oanda.com/currency/average.

[22] Real Property Gains Tax recorded an increase of nearly 42 percent in tax collection in 2005 compared to 2004.

Table 1.3
Contribution of Direct Taxes to the Federal Government's Revenue

Year	Revised Estimates of Direct Taxes		Collection of Direct Taxes*		Percentage Variance
	MYR Billion	NZ$ Billion**	MYR Billion	NZ$ Billion**	%
2001	34.25	15.55	41.79	18.98	+22.01
2002	46.12	20.94	44.32	20.13	-3.90
2003	46.48	21.11	42.82	19.44	-7.87
2004	46.42	21.08	48.63	22.08	+4.76
2005	48.35	21.96	56.85	25.82	17.58
2006	62.64	28.44	65.74	29.85	+4.95

* The amount of direct taxes based on the actual figures collected by the IRB before deducting the allocation for the tax refunds. Source: Inland Revenue Board of Malaysia (2005; 2006).
** The conversion rate is based on average annual conversion rate in 2009 obtained from http://www.oanda.com/currency/average.

Even though the collection of direct taxes appears to be significant and growing in Malaysia, this is only with respect to taxes such as company income tax, petroleum income tax and RPGT, but not for individual income tax. Individual income tax, which accounts for approximately 13.74 to 19.47 percent of direct taxes over the periods 2001 to 2004 (refer Table 1.4), was at its peak in 2004 with MYR9.47 billion (NZ$4.30 billion) collected. In 2005, the percentage dropped by two percent from the previous year. The percentage dropped further in 2006 to 15.84 percent although the amount collected is recorded as the highest. Clearly, the drop is not related to the applicable tax rates as they remained unchanged from 2002 to 2006.

A possible explanation for such a decline may be the tax incentives provided for individuals in 2005 and 2006 that may have reduced their

taxable income and consequently their tax liabilities. Nonetheless, there were few tax incentives offered during these years that would have significantly affected taxpayers' taxable incomes, except for tax relief on the Employee Provident Fund (EPF) and insurance premiums that increased from MYR5,000 (NZ$2,270) to MYR6,000 (NZ$2,725).[23] Another possible reason would be a drop in the employment rate. However, a review of the employment rate between 2004 and 2006 indicates a growth rate of six percent (Economic Planning Unit Malaysia, 2007b). Theoretically speaking, a higher employment rate will result in higher incomes and consequently tax collection, or amounts at least on par with the previous year. However, the reported percentage of individual income tax collected in 2005 and 2006 indicates otherwise.

It might be argued that the percentage of individual income tax has possibly remained constant. A drop in the percentage of individual incomes over the direct taxes is perhaps due to the fact that other direct taxes grew more quickly than individual income tax. This view is partially correct as the percentage variances for direct taxes in 2005 and 2006 were about 16.9 percent and 15.6 percent, respectively, while the percentage variances for individual income tax in the same years were only eight and nearly two

[23]Another incentive that changed was the increase from MYR5,000 (NZ$2,270) to MYR6,000 (NZ$2,725) for personal relief given to disabled persons. In addition, an increment of MYR1,000 (NZ$454) relief is also given for an individual with a spouse who is disabled. Other than those changes, computer and book rebates had small increments of MYR100 (NZ$45) and MYR200 (NZ$91), respectively (Ministry of Finance Malaysia, 2005, 2006).

percent, respectively. However, it is important to note that the percentage variances of individual income tax for the 2003 and 2004 years were 24 and 25 percent, respectively. These figures are much higher than the percentage variances reported in 2005 and 2006.

Table 1.4
Individual Income Tax Collection from 2001-2006

Year	Direct Taxes		Individual Income Tax		Individual Income Tax over Direct Taxes	Variance (%)	
	MYR Billion	NZ$ Billion*	MYR Billion	NZ$ Billion*	%	Direct Taxes	Individual Income Tax
2001	41.79	18.98	7.63	3.46	18.25	-	-
2002	44.32	20.13	6.09	2.77	13.74	6.05	-20.18
2003	42.82	19.44	7.57	3.44	17.68	-3.38	24.30
2004	48.63	22.08	9.47	4.30	19.47	13.57	25.10
2005	56.85	25.82	10.22	4.64	17.98	16.90	7.92
2006	65.74	29.85	10.41	4.73	15.84	15.64	1.86

Source: Inland Revenue Board of Malaysia (2005; 2006).
* The conversion rate is based on average annual conversion rate in 2009 obtained from http://www.oanda.com/currency/average.

Another potential explanation for the smaller percentage of individual income tax collection in 2005 and 2006 is non-compliance behaviour (which is of interest to this study) among taxpaying individuals, as highlighted in the IRB's Annual Reports. The non-compliance behaviour can be traced through:

(1) the submission of return forms to the IRB;

(2) the timeliness of that submission; and

(3) the accuracy of the computation of the tax liability.

While tax obligations require taxpayers to submit their return forms timely and accurately, the IRB Annual Report only documents the number of return forms issued and received. A comparison made between 2004 and 2006 shows that approximately 35 percent (in 2004) and 24 percent (in 2005 and 2006) of individual taxpayers with employment income did not submit their return forms[24] (refer Table 1.5). While there is possibly evidence of an increasing trend in the compliance rate, the data only shows completion but not the timeliness and accuracy of the return forms submitted. Thus, there is a possibility that the actual non-compliance rate could be higher as some taxpayers who submitted returns did not meet the timeliness and accuracy criteria. Hence, other means of assessment are needed to capture the actual non-compliance rate. One possible way is to separate timely-submitted return forms from those which were not submitted on time, with close scrutiny of return forms submitted on time to check for their accuracy.

One might argue that the 24 percent of non-compliance (in 2005), as reported in the IRB Annual Report, does not necessarily reflect the level of non-compliance, but is due in part to other reasons such as a different filing status. This view can be argued on the basis that individual taxpayers in Malaysia are required to file either Return Form B (those with business

[24] A higher compliance rate, however, is reported for individuals with business incomes, at rates of 73, 80 and 70 percent, for the 2004, 2005 and 2006 years, respectively (refer Table 1.5).

income and other income) or Return Form BE (those with employment income and other income). If a taxpayer has a different filing status, they will normally move from either filing Return Form B or Return Form BE, but not any other forms. Thus, we should expect high 'compliance' in one type of return form and possibly low 'compliance' in the other. However, a review of submissions of return forms in 2004 and 2005 shows that the 'compliance' rate by individual taxpayers with employment income only increases by 11 percent, while those with business income rises minimally (7 percent). While the submission of return forms by individual taxpayers with employment income in 2006 suggests a very minimal increase at less than 1 percent, the 'compliance' rate among taxpayers with business income dropped by 10 percent.

Further, Table 1.5 indicates incremental growth in the number of return forms (both B and BE) issued (and received) in 2005 and 2006, relative to 2004. The IRB Annual Report suggests that this increment was due to separate issuance of tax return forms to husbands and wives, who each have sources of income, and the increase in the number of files registered (Inland Revenue Board of Malaysia, 2005, 2006). Theoretically speaking, when the number of return forms issued increase, the number of returns submitted must increase as well. This assumption holds true when comparing the 2004 and 2005 years, where the number of return forms issued increased by 16 percent and the rate of submissions increased by 32

percent. In 2006, although the number of return forms issued only decreased minimally (at less than one percent compared to the previous year), the rate of submissions declined by five percent. This ratio does not reasonably equate with the decrease of return forms issued in 2006.

Table 1.5
Issuance and Receipt of Tax Returns for Individuals from 2004 to 2006

Types of Income	Return Forms for Employment (BE)		Basic Tax Compliance (%)	Return Forms for Business (B)		Basic Tax Compliance (%)
	Issued	Received		Issued	Received	
2004	1,959,183	1,283,888	65.5	1,061,730	778,181	73.3
2005	2,198,914	1,683,201	76.5	1,314,006	1,051,672	80.0
2006	2,105,802	1,621,233	76.9	1,380,648	974,592	70.58

Source: Inland Revenue Board of Malaysia (2005; 2006).

In addition to basic non-compliance, the IRB's report further documented the following 'alarming'[25] statistics relative to the previous year:[26]

(1) 9,954 individuals were banned from leaving the country in accordance with Section 104 of the Income Tax Act 1967[27] (Malaysia) with

[25] This is the author's own view when comparing with the previous year's statistics.

[26] The 2005 IRB Annual Report suggests that: (1) 9,066 individuals were banned from leaving the country in accordance with Section 104 of the Income Tax Act 1967 (Malaysia) with outstanding tax payments of MYR245.09 million (NZ$111.29 million); (2) 466 cases filed in the courts for MYR30.65 million (NZ$13.92 million) tax; (3) 39 bankruptcies were filed for individuals involving MYR9.85 million (NZ$4.47 million); and (4) the IRB visited 1,113 individuals' premises and discovered tax in arrears of MYR37.5 million (NZ$17.03 million) (Inland Revenue Board of Malaysia, 2005). These statistics were even lower in the 2004 year (for details, see Inland Revenue Board of Malaysia, 2004).

[27] This section stipulates that the Director General of the IRB (DGIR) has the right to ban a person from leaving Malaysia if he/she did not pay all tax payable by him/her, all sums payable including penalties, tax on emoluments or pension, tax on interest or royalties, and special classes of income derived from Malaysia (Inland Revenue Board of Malaysia, 2008).

outstanding tax payments of MYR191,209 million (NZ$86,826 million);

(2) 6,798 cases of individual taxpayers filed in the courts for non-compliance for MYR171.94 million (NZ$78.08 million); and

(3) 219 bankruptcies were filed for individuals involving MYR25.72 million (NZ$11.68 million) tax (Inland Revenue Board of Malaysia, 2006).

The increasing trend of non-compliance indicated in the IRB's Annual Report may give the impression that either taxpayers' negative responses to tax compliance is rising gradually, or the concerted effort of the IRB officers (such as an increase in audit work, etc.) has been fruitful in discovering non-compliance behaviour. From either perspective, it appears that non-compliance behaviour is 'alarming' in Malaysia.

The discussion above provides a clear indication that the Malaysian income tax system under a SAS is not well understood, with unintentional or deliberate non-compliance by taxpayers.[28] However, the reason(s) for such non compliance has (have) yet to be explored, but it (they) may be

[28] Taxpayers with unintentional non-compliance would feel that they have fully complied with the tax law in filing their tax returns but may end up filing incorrectly inadvertently. In other words, they have the willingness to comply but possibly their lack of knowledge may lead to them being non-compliant. In contrast, taxpayers with deliberate non-compliance have the intention not to comply with the tax law. They purposely act against the tax law by either understating their incomes, overstating their expenses or even not submitting their tax returns. This intentional non-compliance is of interest in this study.

associated with the tax fairness perceptions (as indicated by numerous overseas studies, for example, Bordignon, 1993; Etzioni, 1986; Gilligan & Richardson, 2005; Turman, 1995).

1.4 The Compliance Behaviour Problem

Regardless of tax jurisdiction, both New Zealand and Malaysia share something in common, that is, non-compliant tax behaviour.[29] Academic research suggests that there are two basic approaches to reviewing the problem of compliance; that is, the economic deterrence approach and the behavioural approach (James & Alley, 2002). The former tends to analyse compliance in terms of economic costs and incentives, while the latter examines behaviour using approaches drawn from the disciplines of psychology and sociology. While the focus of the economic deterrence approach is efficiency in resource allocation, the behavioural approach frequently focuses on fairness (James & Alley, 2002). Although no approach is clearly superior to the other, it is important to apply an appropriate approach to undertaking research, as suggested by James and Alley (2002). As the researcher intends to study the fairness issue in depth, the behavioural approach is particularly relevant. The differences between the two approaches to tax compliance are summarised in Table 1.6.

[29] Relatively, an overview of the compliance level in both New Zealand and Malaysia indicates that New Zealand is experiencing non-compliance behaviour on a much lower scale to Malaysia.

Table 1.6
Approaches to Tax Compliance

Tax Compliance	Economic Deterrence Approach	Behavioural Approach
Concept	Tax gap (100% compliance less actual revenue collected) (James & Alley, 2002)	Voluntary willingness to act in accordance with the spirit as well as the letter of tax law. This is one definition suggested by James and Alley (2002) but not a universal definition of tax compliance. Other definitions include those suggested by Jackson and Milliron (1986) and Roth et al. (1989).
Definition	Narrow	Wide
Tax compliance	Economic rationality	Behavioural cooperation
Exemplified by	Trade off: ▪ Expected benefits of evading ▪ Risk of detection and application of penalties Maximise personal income and wealth	Individuals are not simply independent, selfish utility maximisers. They interact according to differing attitudes, beliefs, norms and roles. Success depends on cooperation. Other important variables affecting compliance behaviour are discussed in Jackson and Milliron (1986) and Richardson and Sawyer (2001).
Key issues	Efficiency in resource allocation	Equity, fairness and incidence
Taxpayer seen as	Selfish calculator of pecuniary gains and losses	'Good citizen'

Source: Adapted from James and Alley (2002, p33)

James and Alley (2002, p. 29) suggest that under the economic deterrence approach, tax compliance is concerned with the tax gap, which is defined

as “the difference between the amount of tax imposed by the tax law and the actual amount of tax collected.” This definition has been criticised by Mazur and Plumley (2007) as being too narrow and simple. They propose that the tax gap is actually made up of three components, namely: the nonfiling gap; the underreporting gap; and the underpayment gap. The nonfiling gap refers to the amount of tax not paid on time as a result of either filing the return forms after the due date or not filing at all. The underreporting gap is the additional tax due on timely filed return forms arising from the misreporting of the tax liability on those returns, with the underpayment gap being the tax that is reported on timely filed returns, but not paid on time (Mazur & Plumley, 2007).

With the behavioural approach, there are several definitions of tax compliance including that offered by James and Alley (2002). Other definitions include Jackson and Milliron (1986, p. 130) who describe tax compliance behaviour as “filing the return forms accurately, timely and fully paying the tax amount without IRS [revenue authority] enforcement efforts.” This definition is more comprehensive (but not encompassing aspects of law) compared to the definition offered by James and Alley (2002), but it has also been criticised for not taking into account court decisions. Roth et al. (1989, p. 2) proposed that tax compliance behaviour will take place when “all required tax returns are filed at the proper time and the return forms accurately report tax liability in accordance with the

Internal Revenue Code, regulations, and court decisions applicable at the time the return is filed." This definition offers a better understanding of tax compliance behaviour (Richardson & Sawyer, 2001) and is adopted in this study.

1.5 The Significance of this Study

Notwithstanding the importance of tax fairness in compliance decisions (for example, Gilligan & Richardson, 2005; Hite & Roberts, 1992; Porcano & Price, 1992; Song & Yarbrough, 1978), and the concerning level of non-compliance behaviour (especially in Malaysia), there is limited empirical evidence on this issue of fairness in the tax systems in both New Zealand and Malaysia. In New Zealand, Hasseldine et al. (1994) reported that New Zealanders perceived the system (at that time) as unfair. However, this study may be outdated as the New Zealand tax system has developed significantly, especially since 2000. On the other hand, Tan (1998), who focused on the demographic background of New Zealanders, claims that the fairness perception is highly correlated with the level of income earned. Her findings may still be relevant even though the study was conducted a number of years ago. Nonetheless, there is a need for a more current research as the level of income earned by New Zealanders has increased substantially (about 56 percent) since then.[30]

[30] The annual median income for New Zealanders in 1996 was NZ$15,600 compared to NZ$24,400 in 2006 (Statistics New Zealand, 2006).

Mustafa (1996), in his study in Malaysia, focused on the limited dimensions of tax fairness but he does not comment on the determinants of such judgments. A more recent study by Azmi and Perumal (2008), on the other hand, only explored taxpayer's fairness perceptions with no further investigation made on their effect on compliance behaviour.

Thus, the findings from this study are expected to provide an update on taxpayers' fairness perceptions and compliance behaviour in both countries. For example, the information on the current level of fairness perceptions among the taxpayers, particularly on the dimensions that require attention from the tax authorities may be helpful in improving the income tax systems. In this instance, the findings may suggest that the respondents in New Zealand are generally happy with the current income tax system except in the case of general fairness. Having this information will assist the New Zealand tax authority to focus on possible ways to improve this fairness dimensions among taxpayers while maintaining positive fairness perceptions on the remaining dimensions. In this regard, the approach taken would be problem solving-oriented with the intention to resolve the issue identified rather than to overhaul the whole income tax system.

The information on the possible influence of fairness perceptions, attitude, subjective norms and perceived behavioural control in taxpayers'

compliance behaviour is undeniably important for the tax authorities to plan and develop the relevant and appropriate mechanisms to improve compliance. If the findings suggest that fairness perceptions significantly influence taxpayers' decisions whether or not to comply, the tax authorities may need to emphasise on ways to improve fairness perceptions, such as by being transparent about how the tax money being spent, allocating fair distribution among taxpayers, treating the taxpayers in sensible manner etc. On the other hand, if attitudes play an important role in taxpayers' compliance behaviour, strategies such as incorporating tax education in high school curriculum, consistent public campaign through mass media and ongoing seminars for the taxpayers may be helpful to encourage taxpayers to comply.

In addition to this, the information on taxpayers' level of knowledge and the perceived complexity of their respective income tax systems may benefit the tax authorities to develop their tax education and tax simplification programme. For instance, tax authorities may have to focus on the technical aspect of the tax knowledge and the content of the tax law in their efforts to improve taxpayers knowledge and reduce the complexity of the income tax systems. This is particularly important if tax knowledge and tax complexity have an influence on fairness perceptions.

In short, the information to be obtained from this study should assist policy-makers, particularly tax authorities, in reviewing and modifying current tax systems, where necessary, to improve voluntary tax compliance.

While a considerable number of studies have been undertaken, they have tended to focus on the association between tax fairness and tax compliance, rather than on the factors contributing to tax fairness perceptions. It is the researcher's view that understanding the 'root causes' of a certain phenomenon is equally important to knowing its impact. Only a few researchers have addressed this issue by looking at the factors contributing to fairness perceptions in their studies (Bobek, 1997; Fallan, 1999; Harris, 1989). Fallan (1999), who carried out an experimental study and focused on the effect of tax knowledge, found that students with tax knowledge have higher fairness perceptions of the tax system than those who do not possess tax knowledge. A decade earlier, Harris (1989), who also focused on tax knowledge, demonstrated that tax knowledge is positively related with fairness perceptions and consequently compliance behaviour. However, no evidence was found for a direct impact of tax knowledge on tax compliance behaviour. In that study, however, the researcher focused on overall fairness rather than its multi-dimensional aspects. In New Zealand and Malaysia, as far as the researcher has ascertained, there is no empirical evidence documenting the causes of fairness perceptions.

It is interesting to study the cross-cultural effect on tax fairness perceptions and compliance behaviour. To date, major cross cultural studies on tax fairness have been undertaken in Australia, Singapore and the US (Bobek et al., 2007), and Australia and Hong Kong (Gilligan & Richardson, 2005). In their study, Bobek et al. (2007) solely focus on the effect of social norms on the compliance behaviour. Gilligan and Richardson (2005), in their preliminary study on a sample of postgraduate students, found that no universal relationships or patterns exist cross-culturally between tax fairness perceptions and tax compliance behaviour. Their results, however, may have been different if the sample had considered other members of the taxpaying public because of their different education levels, experiences and level of tax knowledge. Thus a more comprehensive sample is expected to provide a better explanation of the cross-cultural effects.

Although both New Zealand and Malaysia are Commonwealth countries and have adopted a SAS for taxation, they have distinct features in respect of their economies, ethnicities and cultures. New Zealand is a developed country with 4.35 million population and has per capita income of NZD42,974 (New Zealand, 2010). Malaysia is a developing country with population of 28.3 million. Its per capita income is MYR24,055 (equivalent to NZD10,929) (MIDA, 2010). In terms of its demographic, the majority of New Zealanders are of British descent, complemented with

other European cultures including Dutch, Greek, Italian, French, German, Scandinavian and Dalmatian (New Zealand, 2010). The largest non-European group is the indigenous Maori. While in Malaysia, the major ethnic groups are Malays, Chinese, Indians, Kadazans and Ibans. The different ethnicities that exist in Malaysia have their own unique cultural identities. However, they have slightly influenced each other, especially in areas such as cuisine and modern music. The differences between these two countries may provide an interesting perspective to the cross-cultural studies.

Studies on tax fairness worldwide have seen the use of various methods, such as ANOVA (Carnes & Cuccia, 1996; Gilligan & Richardson, 2005; Maroney et al., 1998), factor analysis (Gerbing, 1988), multivariate analysis (Harris, 1989) and logistic regression (Bobek, 1997). While these multivariate techniques have provided researchers with powerful tools to expand their explanatory abilities of tax compliance behaviour, they can only examine a single relationship at a time, either between independent variables or between the dependent and independent variables (Hair et al., 2006). Structural equation modelling (SEM),[31] on the other hand, combines factor analysis and multiple regression, which enables the researcher to simultaneously examine a series of interrelated dependent relationships

among the measured variables and latent constructs as well as between several latent constructs (Gerbing et al., 1994; Hair et al., 2006). In other words, SEM has the power to reveal not only the dimensions of particular constructs and the relationship among the constructs, but also their effects on the dependent variable under study. In addition, applying SEM also enables hypothesised dependent variables to become independent variables in a subsequent dependence relationship (Hair et al., 2006).[32] Notwithstanding its known benefits,[33] to the researcher's knowledge, only a few taxation studies have applied the SEM method (Braithwaite & Ahmed, 2005; Cox & Eger, 2006; Karanta et al, 2000).[34]

In order to complement the quantitative analysis conducted through the survey questionnaires, this study also employs an interview approach to gain a better understanding on taxpayers' perceptions. While the quantitative analysis emphasises the statistical significance, the qualitative

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[31] At this point, the term SEM is generally used to encompass both the co-variance based and component based modelling. However, in Chapter 4 on Research Methodology, the SEM refers to the co-variance based modelling.

[32] SEM has become an extremely popular technique in the social sciences based on these key advantages. Before the 1990s, SEM was not widely used due to its perceived complexity, but by 2000, more than 450 articles applying the SEM method were published in the academic social literature (Hair et al., 2006). Today, SEM is the dominant multivariate technique followed by cluster analysis and multivariate analysis of variance (MANOVA) (Hair et al., 2006).

[33] Cox and Eger (2006) examine the mediating effect of procedural tax complexity on taxpayers' behaviour to tax non-compliance. Their research, which specifically focuses on the motor fuel tax system, found procedural tax complexity fully mediates taxpayer non-compliance. Braithwaite & Ahmed (2005), on the other hand, investigate the spill-over effect of government education policy (HECS) in Australia on tax morale, and found that those who oppose government education policy have lower HECS morale and consequently this weakens the tax morale.

[34] A study by Karanta et al. (2000) on Swedish taxpayers' perceptions on public sector performance proves the flexibility of SEM and the powerful modelling performed based on survey data.

approach helps to explain the phenomenon based on the rich data extracted during the interviews, thus providing richness to the findings.

1.6 Objectives of the Study

Generally this study aims to understand how New Zealanders and Malaysian taxpayers perceive tax fairness and compliance behaviour issues. Specifically, there are five objectives of this study. The first is to observe whether New Zealand and Malaysian taxpayers have similar views with regard to fairness perceptions, tax knowledge, complexity of the income tax system and their compliance behaviour. The second objective is to confirm whether New Zealand and Malaysian taxpayers have multi-dimensional perceptions on the fairness of the income tax system. The third objective is to investigate the role of fairness perceptions, together with the TPB elements in taxpayers' compliance behaviour. The fourth objective is to discover the impact of tax knowledge and tax complexity on taxpayers' fairness perceptions and perceived behavioural control. The final objective is to examine the impact of fairness perceptions on taxpayers' attitudes towards compliance. These five objectives of the study are addressed through several research questions and the relevant hypotheses which are discussed in Chapter 3 on Conceptual Framework and Hypotheses Development.

1.7 Overview of Research Framework, Methodology and Method

In order to meet the objectives of the study, both positivism and non-positivism underlying research framework are combined. The positivism approach which emphasises on empirical means (or objectivity) to create knowledge is used to investigate whether the relationship between the factors under study exist, while the non-positivism approach which is more subjective in nature is used to provide an in-depth understanding of such relationship and enrich the findings from the quantitative approach. In other words, the two inquiry paradigms are related in the sense that the qualitative approach is used to inform the quantitative approach. This mixed methodology approach[35] is deemed appropriate as the relationships under study are regarded as complex and go beyond the depths of empirical realism. In particular, this study adopts the stance of critical realism which seeks to answer both 'how' and 'why' questions (McKerchar, 2010).

To be consistent with the critical realism approach (at least) one empirical method (in this study, a survey) and one qualitative approach (that is semi-structured interview) were employed. The methods were carried out sequentially with the intention that the interviews will enrich the findings in the survey.

[35] Among the approaches that lie on the continuum between the positivism and non-positivism are critical realism, pragmatism and participatory theory (McKerchar, 2010).

1.8 Summary

This chapter provides an introduction to the issue of fairness in tax compliance decision-making. Then the chapter describes the current implementation of the income tax systems in both New Zealand and Malaysia. This overview leads to an appreciation that both the New Zealand and Malaysia are experiencing the problem of non-compliance behaviour. In addition, a discussion on possible approaches for dealing with noncompliance behaviour is presented, where economic deterrence and behavioural approaches are differentiated. A discussion on the significance of the study further discusses both the practical and theoretical contributions of the study. This is followed by an overview of the objectives of the study. The chapter concludes with a brief discussion on research framework, research methodology and methods adopted in this study.

The remainder of the thesis is organised as follows. Chapter 2 reviews the relevant literature and theories that form the foundation for the study. This is followed by Chapter 3 which develops the conceptual framework and research hypotheses. In Chapter 4 the research methods used are described. The results from applying these methods are presented in Chapters 5 and 6, for the surveys; and Chapters 7 and 8 for the interviews. A discussion of the results and their implications follows in Chapter 9. Finally, the thesis

concludes in Chapter 10, with the limitations of the study and future directions for research presented.

Chapter 2

Literature Review and Relevant Theories

2.1 Introduction

This chapter begins with a discussion of relevant theories on fairness perceptions which include Equity Theory, Distributive Justice Theory (DJT) and Procedural Justice Theory (PJT). This is followed by a discussion on the two dominant theories of human behaviour, namely the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB). These theories form the foundation for the following discussion on fairness perceptions and compliance behaviour. This discussion is followed by an overview of the relevant literature on tax fairness, tax compliance and the variables under investigation.

2.2 Theories on Fairness Perceptions

2.2.1 Equity Theory

The first theory addressing fairness perceptions that is relevant for this research is Equity Theory. Equity Theory emerged in the 1960s through the work of Adams (1965) who was particularly interested to test the concept of justice in organisations (Greenberg, 1987). Since then, Equity Theory has been extended (Eckhoff, 1974; Leventhal et al., 1980; Thibaut & Walker, 1975) and applied in various fields of studies, such as payment and job-related rewards (Aryee et al., 2004; Campbell & Pritchard, 1976;

Greenberg, 1982; Watson et al., 1996), taxation (Bobek, 1997; Carnes & Cuccia, 1996; Gilligan & Richardson, 2005) and information systems (Douglas et al., 2007; Joshi, 1989).

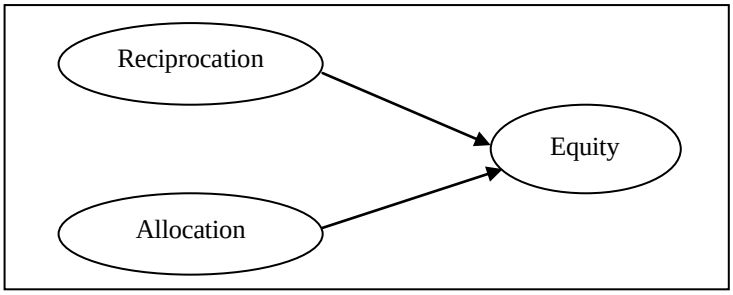
Adams (1965) suggests that Equity Theory comprises two dimensions namely reciprocation and allocation. Reciprocal equity, or exchange fairness, is based on the premise that one would only respond fairly if the other party acts fairly to them. Within this exchange framework, equity or fairness is achieved when there is an equivalence of the outcome/input ratios for all parties involved in the exchange (Cook & Hegtvedt, 1983). Inequity, on the other hand, is said to exist when these ratios are not equal. In other words, a person will perceive a system as fair if the benefit he/she receives equals their contribution, and vice versa.

In contrast to reciprocal fairness, which deals with mutual exchange, Eckhoff (1974) contends that allocation fairness merely involves a one-way distribution of resources across a group or circle of recipients. This fairness dimension is also known as indirect exchange (Blalock & Wilken, 1979).

The original Equity Theory of Adams (1965), as expressed in Figure 2.1, received a lot of criticism as a result of its simplistic premises (Bobek, 1997; Leventhal, 1980). Researchers critical of Equity Theory claim that,

in a judgment on fairness, a number of other factors need to be addressed apart from exchange (either mutual or indirect) fairness.

Figure 2.1
Basic Equity Theory



Schematic representation of Equity Theory

2.2.2 Distributive Justice Theory

In order to extend the idea of allocation as suggested in Adam's (1965) Equity Theory, DJT was introduced. DJT, which represents one part of Social Comparison Theory (Lamm & Schwinger, 1980), postulates that individuals not only judge equity in terms of assessing their benefits they receive from their tax dollars (exchange fairness), but also by comparing themselves with others. In other words, individuals compare their benefits-received-to-contributions-ratio with that of others in their reference group, and if individuals find a disparity, they find their dealings inequitable (Walster et al., 1978). Based on this premise, DJT assumes that distribution outcomes should be equal among those with similar contributions.

However, in the process of allocating an incentive or reward, the principle of exchange fairness is not always maintained. There are circumstances in

which the allocation of rewards violates exchange fairness as indicated in previous studies (Greenberg, 1987; Schwinger, 1980). Having this in mind, Leventhal (1976) contends that distributive fairness can be achieved by applying allocation rules, namely the equity rule, equality rule or needs rule, depending on the situation.[36] In achieving fairness, the equity rule suggests that there must be relative equality between an individual's contribution and benefits. Simply stated, the equity rule requires individuals to be compensated with the same ratio to their effort, as stated in exchange fairness. In contrast, the equality rule calls for equal distribution of rewards regardless of individual contribution. The equality rule suggests that everyone deserves to be treated equally irrespective of his or her contribution. With the needs rule, Leventhal (1976) proposes that the allocation decision should be made after taking into account the recipients' needs. Based on this rule, individuals with a low or a zero contribution may be allocated more benefits (to fulfill their needs), as compared to those with a higher contribution.

Eckhoff (1974), on the other hand, incorporates five principles that form DJT, of which three of them are similar to Leventhal (1976). The principles are relative equality (the equity rule), objective equality (the equality rule), subjective equality (the needs rule), rank order equality and

[36] For instance, the equality rule is more appropriate if the main concern is to preserve social harmony among group members (Deutsch, 1975).

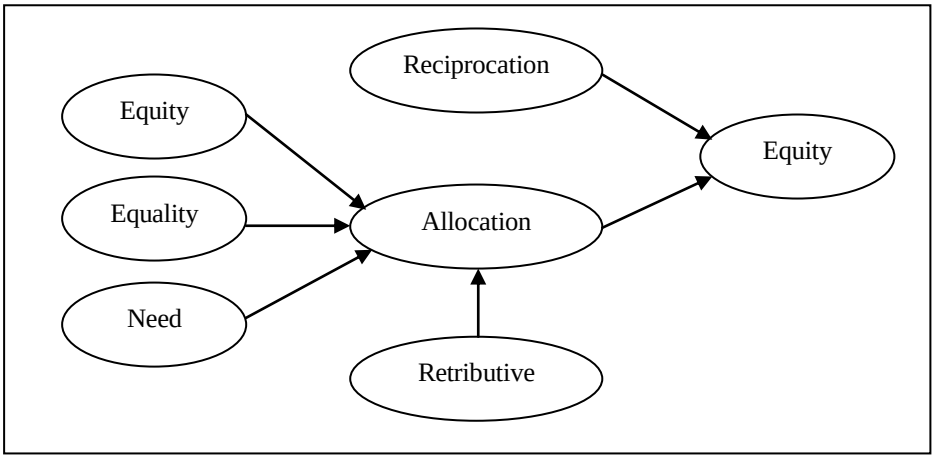
equal opportunity. The rank order equality criterion postulates that, if investments of the members of one group are higher than those of another, their rewards should be higher too (Homans, 1958). This principle suggests that, even though the effort/reward is not necessarily equivalent, yet those with higher contributions should be allocated more benefits than other groups. The remaining principle is equal opportunity, which is normally discussed in relation to racial integration policies (Cook & Hegtvedt, 1983).

The above discussion tends to focus on the positive side of DJT, that is, the allocation of benefits. However, DJT is also concerned with the fairness of allocation of punishments, known as retributive fairness (Cook & Hegtvedt, 1983). Under retributive fairness the social system is considered fair if the penalty imposed matches the committed crime. Similarly, the social system will also be perceived as fair if the compensation received is equivalent to any loss incurred in the social system.

DJT has been widely applied in social science studies (Deutsch, 1975; Lamm & Schwinger, 1980; Leventhal, 1976; Mikula & Schwinger, 1978). A review of previous studies by Lamm and Schwinger (1980) provides evidence that the equity principle (relative equality), the equality principle (objective equality) and the needs principle (subjective equality), are the

salient principles of DJT. The features of DJT are diagrammatically expressed in Figure 2.2.

Figure 2.2
Distributive Justice Theory



Schematic representation of Distributive Justice Theory

2.2.3 Procedural Justice Theory

PJT, an extension of Equity Theory, was originally inspired by the contention in the legal context that a community's acceptance of judicial decisions is highly influenced by the procedures employed to formulate them (Fuller, 1961). Applying that foundation, Thibaut and Walker (1975) embark on a study of dispute resolution procedures and report two interesting findings. First, the disputants with process control perceive verdicts fairer than those without process control. Second, disputants that are involved in the decision-making process are more likely to accept the decisions even in the case of adverse outcomes. These findings conclude that procedural fairness is important as it enhances the acceptance level of the outcomes received.

Based on the pioneering effort of Thibaut and Walker (1975), Leventhal (1980) extends the notion of procedural justice into organisational settings contexts. Leventhal (1980) identifies six principles against which fairness of procedures may be evaluated, namely: consistency, bias suppression, accuracy, correctability, representativeness and ethicality.

A consistency criterion requires the allocative procedures be applied consistently among different individuals at all times. No one should be given privileges over another. In addition the consistency criterion also demands the allocative procedures remain constant without frequent change. Regular alterations made to the procedures may lead to a violation of the consistency rule. When the consistency rule is violated perceptions of procedural fairness will decline.

A bias suppression criterion posits that prejudice should be avoided in allocative procedures. Everyone should be treated fairly without any discrimination or misconception. Allocative procedures which promote preferential treatment, or personal self-interest, will violate a bias suppression rule, and consequently procedural fairness will be perceived as unfair.

The accuracy criterion states that allocative decisions must be based on accurate information. This is essential since failure to collect and process

accurate information will result in incorrect decision-making and jeopardise an individual's confidence in the fairness of the procedures adopted. Thus the accuracy criteria should be sustained to increase a positive perception of procedural fairness.

Correctability deals with the opportunity to revise incorrect decisions made. This criteria requires a legitimate channel to modify decisions must exist as a prerequisite for allocative procedures to be perceived as fair.

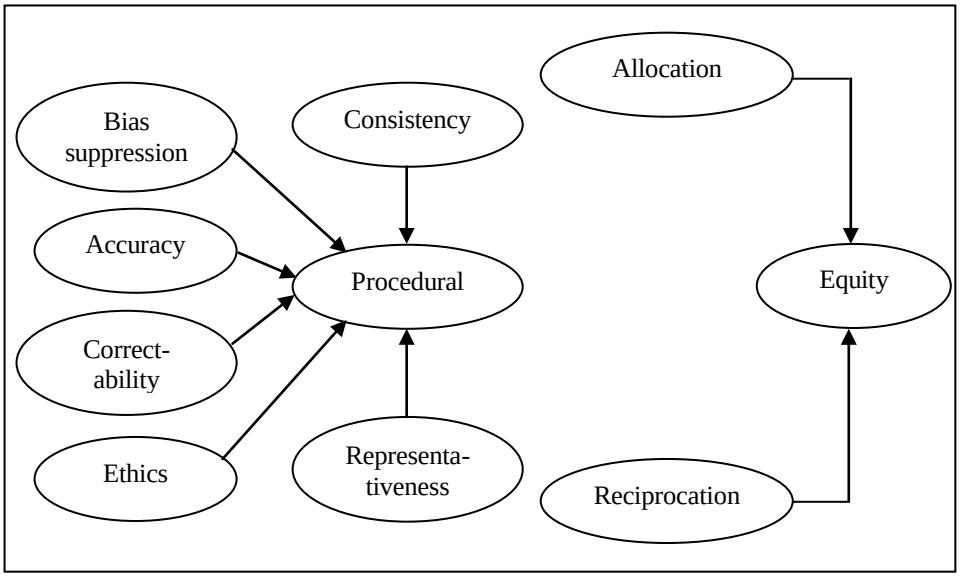
Representativeness is defined as the opportunity given to persons in the decision-making process. The rule postulates that the allocation process must represent the concerns of all recipients to ensure greater acceptance of the procedures.

The final criterion is ethics, which contends that allocation procedures must be based on prevailing moral and ethical standards. In the absence of the ethics rule, individuals may perceive that procedural fairness is violated and thus their fairness perceptions will be reduced.

Previous studies adopting the six principles of Leventhal (1980) suggest consistency (Barret & Tyler, 1986; Fry & Cheney, 1981) and representativeness (Makkai & Braithwaite, 1996), as the most important

criteria in evaluating procedural fairness. The features of PJT are summarised in Figure 2.3.

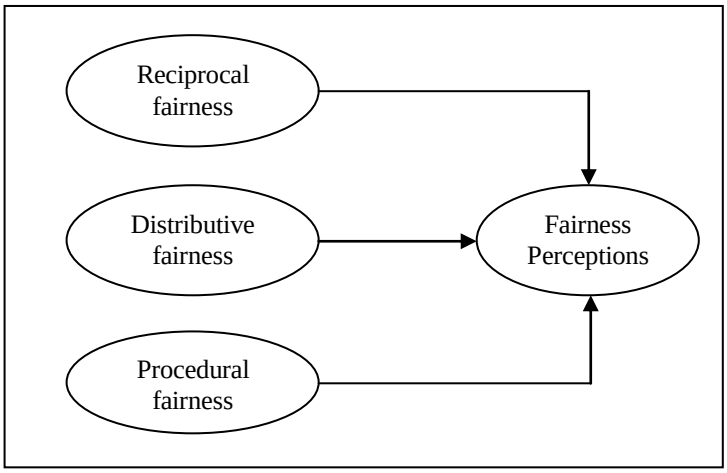
Figure 2.3
Procedural Justice Theory



Schematic representation of Procedural Justice Theory

Based on the above discussion, the extension of Equity Theory (embedded within DJT and PJT) is presented schematically in Figure 2.4.

Figure 2.4
Extended Equity Theory



Schematic representation of Extended Equity Theory

2.3 Theories on Human Behaviour

The Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB) are the dominant theoretical frameworks used in explaining human behaviour (Ajzen, 1988) that are relevant in this study. While both theories have been very successful in predicting behaviours, they have to be applied in appropriate situations to reflect the various determinants of certain behaviours.

2.3.1 Theory of Reasoned Action

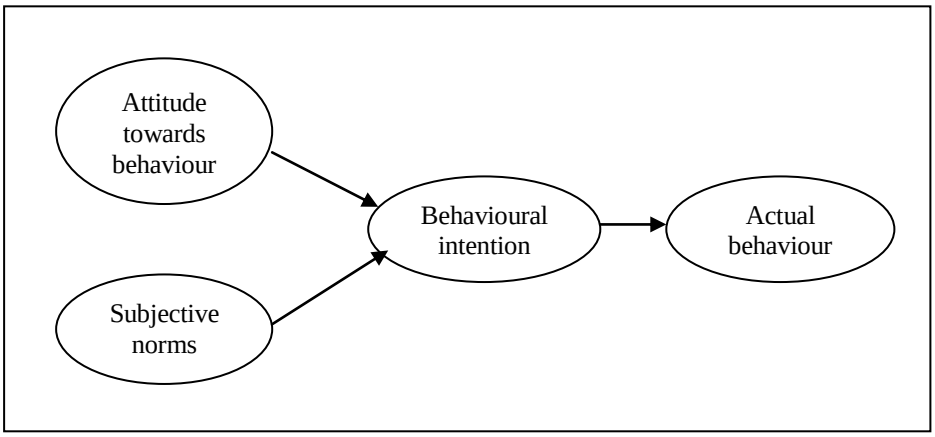
Ajzen and Fishbein (1980) developed the TRA to understand behaviours that are engaged in voluntarily by the individual. The theory assumes performance of such behaviours is dependent only on the individual's motivation to perform (or not to perform). In other words, the TRA suggests that individuals have complete volitional control over their behaviour, and their choice is simply according to the individual's will or intention. In turn, that behavioural intention is determined by attitude towards behaviour and subjective norms.

Attitude towards behaviour is defined as an individual's evaluation of performing the behaviour (Manstead, 2004), which often contains two independent components, namely affective and instrumental attitudes (Ajzen, 2006). Affective attitude deals with emotions such as feeling happy, sad or guilty, if performing certain behaviour while instrumental

attitude refers to a more cognitive consideration to which performing certain behaviour would be advantageous (Ajzen, 2006; Breckler & Wiggins, 1989). In addition, the TRA suggests that attitudes towards behaviour are formed with reference to the behavioural beliefs about the consequences of performing the behaviour and the outcome evaluations (Manstead, 2004).

Subjective norms refer to a person's perceptions of the expectations of the people who are important to him or her, whether he or she should or should not perform certain behaviour (Ajzen, 2006; Fishbein & Ajzen, 1975; Manstead, 2004). To assess such perceptions both injunctive and descriptive qualities are equally important. An injunctive quality, as described under the concept of subjective norms, deals with an individual's perceptions on what the important referents think if he or she performs (or does not perform) certain behaviour. The descriptive quality component relates to an individual's perceptions of whether others important to them would perform (or not perform) such behaviour (Ajzen, 2006). Similar to attitude towards behaviour, subjective norms are also determined by beliefs, known as normative beliefs. Normative beliefs comprise the person's beliefs that important 'others' would expect him or her to act in certain way, and his/her inclination to conform to their expectations (Manstead, 2004). The features of the TRA are graphically presented in Figure 2.5.

Figure 2.5
Theory of Reasoned Action



Source: Adapted from Ajzen and Fishbein (1980, p84)

The success of the TRA in predicting human behaviour and behavioural intentions was documented by Sheppard et al. (1988). In that study, a meta-analysis on 87 separate studies applying the TRA documented weighted average correlations of 0.66 for the relationships between attitude towards behaviour and intention, and also between subjective norms and intention. In addition to this a weighted average correlation of 0.53 was reported for the intention and behaviour relationship. Among the behaviours that have been successfully predicted by the TRA, and included in the study, are the decisions to smoke marijuana, purchase particular brands, and resign from jobs and so on. Apart from that, the TRA has also been used in studies which involve decision-making relating to quitting smoking, engaging in regular exercise, driving within the speed limit (Manstead, 2004), and choosing a future career (Felton et al., 1995).

Despite the ability to predict and explain human behaviour and behavioural intention, the TRA had been criticised for being limited to volitional behaviours only. In other words, the TRA was found to be unsuitable for predicting or explaining behaviours that require skills or resources to perform (Liska, 1984). Such criticisms led to the extension to the TRA, and the emergence of the new model, the Theory of Planned Behaviour.

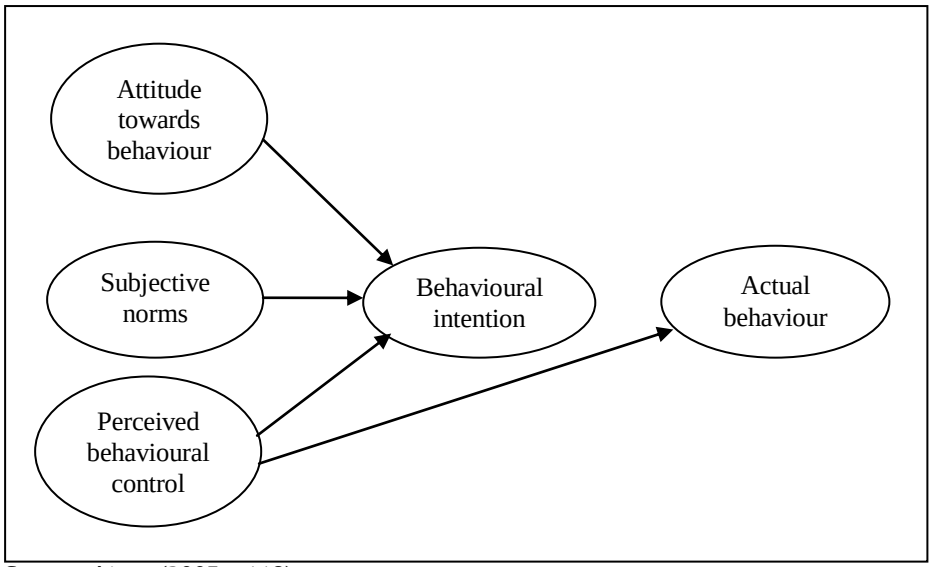
2.3.2 Theory of Planned Behaviour

Realizing the fact that not all behaviours are under complete volitional control, Ajzen (1985) came up with an extended model of the TRA, that is the TPB. In the TPB, he proposed a new construct to measure the individual's perception of how easy or difficult it is to perform the behaviour, known as perceived behavioural control. Such perceptions are the results of both internal (such as knowledge and skills) and external factors (for example, time, opportunity and resources), available to an individual (Kraft et al., 2005). The construct stipulates that a behaviour that is easy to perform is high in perceived behavioural control, while one that is difficult to perform is low in perceived behavioural control (Manstead, 2004). The author further argues that an individual with high perceived behavioural control will be more likely to form the intention to perform the behaviour in context than an individual with lower perceived behavioural control. In short, the TPB suggests that one's motivation to perform a particular behaviour is also influenced by the individual's perception of

how easy or difficult it is to perform such behaviour, in addition to attitudes towards behaviour and subjective norms.

The TPB also suggests that perceived behavioural control, together with behavioural intention, will directly affect actual behaviour. Such a relationship suggests that a person with a high perceived behavioural control and who has formed his or her intention to perform certain behaviour, will be more likely to engage in that behaviour than one with low perceived behavioural control. Another interpretation of such a relationship is that the failure to perform certain behaviour (when one already had the intention to perform) could be due to the lack of perceived behavioural control (Manstead, 2004). The TPB model is presented schematically in Figure 2.6.

Figure 2.6
Theory of Planned Behaviour



Source: Ajzen (2005, p118)

The TPB also indicates that perceived behavioural control is dependent on beliefs (as for attitudes towards behaviour and subjective norms); that is, control beliefs. Control beliefs are defined as the perceptions of the availability of skills, resources and opportunities; and the perceptions on how important those resources are in achieving the outcomes (Mathieson, 1991). With regard to the wide use of the TPB in empirical research, Ajzen (1991) and Godin and Kok (1996), in their reviews of prior studies, recognised the good predictive power of the TPB in explaining human intentions and or behaviour. Some examples of studies that have successfully applied the TPB in predicting behaviours include speeding (Paris & Broucke, 2008), cardiopulmonary resuscitation (CPR) involvement (Dwyer & Williams, 2002), and adolescent smoking (Guo et al., 2007).

2.4 Application of the Theories in this Study

2.4.1 Equity Theory and Tax Fairness

Equity Theory predicts that individuals judge fairness on the basis of outcomes, and they believe that incentives and punishments should be distributed accordingly, with reference to the inputs or contributions (Bobek, 1997). In addition, Equity Theory posits that individuals are more likely to comply with the rules if they perceive that they are being treated fairly under the system. In simple terms, Equity Theory is concerned with exchange fairness.

In the context of taxation, the 'exchange parties' are individuals (taxpayers) and the government. Theoretically, individuals will perceive the tax system as fair if the benefits received from the government for the amount of tax paid is an equitable ratio. If the ratio is not equitable (but is adverse to the taxpayers), then the exchange is deemed unfair and individuals are likely to seek to restore equity, through non-compliance. However, in practical terms, exchange fairness in taxation may not be achieved due to different needs or requirements of taxpayers. For example, a high income earner will probably receive less benefits from the government, despite their contribution, compared to the low income earner.

2.4.2 Distributive Justice Theory and Tax Fairness

The essence of DJT is that individuals evaluate the fairness of the distribution outcomes by comparing the benefits-received-to-their contributions-ratio with that of others in their reference group. Individuals will find their interactions as equitable if the distribution outcomes are equal among those with similar contributions (Walster, et al., 1978); this is known as horizontal fairness.

In the context of taxation, horizontal fairness (equity) suggests that equals before tax should be equal after tax (Gravelle & Gravelle, 2006). In other words, it requires individuals in similar economic positions to be taxed at similar rates regardless of their welfare. This is based on the equality rule

suggested by Leventhal (1976). However, in taxation, horizontal fairness should least be permitted to stand on its own. Notwithstanding a similar amount of income, two persons might have different commitments, such as the number of dependents. A single person having tax deducted of $2,000 from a gross salary of $10,000 would consider the tax deducted as not so burdensome compared to another person with the same income (and tax withheld) but with four dependents. Thus, this dimension of fairness should be complemented with the other dimensions of distributive fairness to ensure an overall fairness perception.

Leventhal (1976) suggests that distributive fairness should be made after taking into account the recipients' necessities. The idea of this principle is that the ratio of inputs and outputs need not necessarily be equivalent to achieve fairness, but rather it depends on individuals' needs. This is known as vertical fairness (equity). In the case of taxation, vertical fairness is usually concerned with the ability to pay (Kirchler et al., 2006). In other words, vertical fairness suggests that those with a higher incomes should pay more tax (at a higher rate) than those with a lower incomes. Alternatively, vertical fairness can also be linked to benefits received by the low-income earners. In relation to this, the low-income earners do not only pay less tax but they are also entitled to receive more benefits from the government. Thus, unlike horizontal fairness, vertical fairness takes

into account the 'welfare' of individuals before determining their contribution to tax and entitlement to receive government benefits.

DJT is also concerned with the fair allocation of punishments, which is known as retributive fairness (Cook & Hegtvedt, 1983). A punishment is considered fair if the penalty imposed 'matches' the crime. In taxation, various punishments are available to serve as penalties for non-compliance behaviour. In order to be perceived as fair, the tax system should match the penalty with the non-compliance behaviour appropriately.[37]

2.4.3 Procedural Justice Theory and Tax Fairness

Procedural Justice Theory (PJT) predicts that procedural fairness may have influential effects because fairness in procedures may lead to fairness in outcomes (Thibaut & Walker, 1975). In other words, PJT suggests that the employment of fair procedures is likely to lead to more equitable outcomes than when unfair procedures are employed. In addition, Leventhal (1980) asserts that there are six principles against which fairness of procedures may be evaluated, namely: consistency; bias suppression; accuracy; correctability; representativeness; and ethicality.

[37] There are other forms of fairness/equity which are not covered in this study such as intergenerational equity and intra-generational equity. Intergenerational equity suggests that taxpayers of each generation should contribute to public expenditures from which they derive benefits, without either subsidising or being subsidised by taxpayers in other time periods. Intra-generational equity on the

In the context of taxation, procedural fairness employed by the tax system may influence the fairness perceptions of taxpayers. If taxpayers perceive that procedures applied in assessing their tax returns are unfair, the tendency for taxpayers not to comply is high, and vice versa. In forming their fairness judgments, taxpayers will normally evaluate the consistency of the procedures applied by the tax system. The procedures applied by the tax system should be perceived as consistent throughout time and across all taxpayers. In addition to this, bias suppression is also an important feature of fairness procedures. The procedures in the tax system should not promote preferential treatment or personal self-interest. In other words, all taxpayers must be treated in a similar manner. With regard to accuracy, the tax system should handle tax matters with great care. Decision-making based on the wrong information will lead to perceptions of unfairness by taxpayers. For the correctability criteria, this requires taxpayers to be given an opportunity to revise and amend any incorrect decisions made by them.

To ensure greater acceptance of the tax system, the procedures employed must be representative of all recipients. Thibaut and Walker (1975) provide evidence that disputants who are involved in the decision-making process are more likely to accept the decisions even in the case of adverse outcomes.

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other hand proposes that all citizens should enjoy some minimum standard well being irrespective of their capacity to generate income (Coombs & Dollery, 2002).

Finally, the procedures employed must be based on prevailing moral and ethical standards.

The presence of the above principles in the tax system is important because they form the basis of procedural fairness evaluation. If taxpayers perceive procedural fairness is violated, their fairness perceptions will decline and consequently this will affect their tax compliance behaviour (Ajzen, 1982; Douglas et al., 2007).

2.4.4 Theory of Reasoned Action, Theory of Planned Behaviour and Tax Compliance Behaviour

The TRA predicts that the immediate determinant of the actual behaviour is behavioural intention, which in turn depends on attitudes toward behaviour and subjective norms. Simply stated, the TRA suggests that an individual's intention to act in certain way solely depends on his or her will.

Applying the TRA to the context of tax compliance behaviour, it appears that taxpayers' decisions whether or not to comply, depends solely on their attitudes toward compliance and subjective norms. If they had favourable attitudes toward compliance and subjective norms, they would be more likely to comply with their tax obligations. In contrast, taxpayers will try to avoid or evade paying tax if they have unfavourable attitudes toward

compliance and subjective norms. In short, the TRA concludes that attitudes toward compliance and subjective norms are the only determinants of taxpayers' compliance behaviour. Such an assertion, however, may not always hold true.

In practical terms, taxpayers' intentions whether or not to comply do not simply depend on their will. They may wish to comply but encounter difficulties to perform such behaviour, which will subsequently limit their volitional control. Based on previous studies, factors such as tax complexity, tax knowledge, compliant peers, probability of detection and ethics, have been reported to significantly affect tax compliance behaviour (Richardson & Sawyer, 2001). This demonstrates that tax compliance behaviour is not simply a trivial choice but the decisions made by individuals (whether or not to comply) may result from the ease or difficulty to perform the behaviour, past experiences, knowledge, competencies, resources, opportunities and barriers to perform the task, as highlighted by Dwyer and Williams (2002) in the context of health studies. Having said that, it appears that tax compliance behaviour is more likely to fall under incomplete volitional control. Thus, it is more appropriate in this study to use the TPB, rather than the TRA, in predicting tax compliance behaviour, as suggested by Ajzen (1985).

The rationale between using the TPB rather than the TRA is further justified by Chang (1998), who claimed that some researchers agree that the TPB is more appropriate in predicting unethical behaviour in the context of information technology. Since tax compliance (noncompliance) behaviour also deals with ethical behaviour, the use of TPB seems to be more appropriate. To sum up, Ajzen (1985, p. 36) suggests:

> *"TRA and TPB are identical theories when the subjective probability of success and the degree of control of internal and external factors reach their maximum values. However, when subjective probabilities of success and actual control are less than perfect, we enter the domain of TPB."*

The call to use behavioural models, such as TRA and TPB in tax compliance behaviour, was made by Jackson and Milliron (1986) more than two decades ago, when they claimed the importance of such models in explaining taxpayers' compliance behaviour. In their discussion, the authors assert that studies examining the link between attitudes, intentions and behaviour, either through experiment or survey, would provide significant contribution both to the body of knowledge and policy making. Notwithstanding their emphasis, to the researcher's knowledge, few studies have adopted these behavioural models in their study (as opposed to the economic models), except for few major studies undertaken in the United

States (US) and Canada (Blanthorne & Kaplan, 2008; Bobek, 1997; Efebera et al., 2004; Hanno & Violette, 1996; Trivedi et al., 2005). Undeniably, there are studies which investigate the impact of non-economic or fiscal psychology variables (such as demographic background, attitude, fairness, culture, and ethics), on the intention to comply separately, without integrating those factors in a complete TRA or TPB behavioural model.

2.5 A Review of Past Studies

2.5.1 Studies on Tax Fairness

Policymakers claim that tax fairness is an important goal for the state in order to encourage tax compliance (for example, the tax authority in the US (Inland Revenue Service – (IRS)) has put a great emphasis on fairness perceptions in an effort to improve tax compliance - Bobek, 1997). Thus it is not uncommon for a tax system which violates the basic principles of fairness and efficiency to anticipate non-compliance among taxpayers (Head, 1992). The question is how to define fairness? According to Adam Smith (1776), a tax system is defined as being fair when taxpayers are taxed based on their ability to pay (or vertical fairness). Vertical fairness asserts that taxpayers with different economic situations should be taxed at different rates (Kirchler et al., 2006). This would result in higher income earners paying tax at higher rates than the low-income earners.

However, this definition does not encompass the comprehensive fairness perception since past studies have unanimously agreed that tax fairness is a multi-dimensional construct. For example, Jackson and Milliron (1986) suggest another component to fairness, horizontal fairness. Horizontal fairness is defined as the equal treatment of equally circumstanced individuals (Michael, 1978). In other words, horizontal fairness recommends that taxpayers of similar economic positions should pay the same amount of tax. However, such equal treatment sometimes conflicts with other economic objectives of taxation, which therefore need to be compromised (Holmes, 2001). Holmes (2001) further claims that, in practice, all income tax systems have breached the horizontal fairness premise to meet either economic, social or political objectives.

Other dimensions of fairness are further documented in the following studies. The first study is a major study on fairness perceptions, which was undertaken in the US after the (then) latest Tax Reform Act of 1986 by Gerbing (1988), through a mail survey of 225 taxpayers in the Dallas/Ft. Worth metropolitan area. Using a factor analysis on the self-developed measures of fairness, Gerbing (1988) identified four underlying dimensions of fairness which include:

(1) general fairness and distribution of the tax burden;

(2) exchange with the government;

(3) attitude towards taxation of the wealthy; and

(4) preferred tax rate structure.

Using a refined version of the survey instrument of Gerbing (1988), Christensen et al. (1994), who studied the impact of education on fairness perceptions among 296 university students in the US, report consistent underlying dimensions of fairness, as found in Gerbing (1988), with an additional dimension known as self-interest. Similar findings were documented when a survey instrument was administered among tax professionals and tax educators in the US (Christensen & Weihrich, 1996), providing evidence of the robustness of the instrument (Richardson, 2005b).

Another study on the US income tax system was conducted by Bobek (1997) which was concerned with distributive fairness, procedural fairness and policy fairness. While distributive fairness deals with horizontal and vertical equity, procedural fairness relates to the process employed to reach distribution outcomes. Procedural fairness is argued to be important since it may lead to greater acceptance of the distribution outcomes (Thibaut & Walker, 1975). Similarly, Bobek (1997) argues that the content of the tax law (policy) is also important since it is the antecedent for the distribution outcomes. Bobek (1997) concludes that policy fairness is important for the distribution outcomes to be perceived as fair. In her study, Bobek (1997)

selected three groups of respondents consisting 108 university students, 19 elementary school parents and 51 residents of Florida and Georgia.

While agreeing that fairness perceptions are multi-dimensional, Turman (1995), on the other hand, focuses on one dimension of fairness, that is, preference for either progressive or proportional taxation. In Turman's (1995) study, an experiment involving several tax tasks was conducted with 58 community college students, revealing an overall preference for progressive tax rates.

The above-mentioned literature on various dimensions of fairness perceptions has been widely discussed overseas, especially in the US, while a growing concern over this issue can be seen in Australia and Hong Kong. In Australia, for instance, a survey (also using a modified version of the Gerbing's (1988) instrument) was conducted on postgraduate business students to evaluate their fairness perceptions and the relationship with their tax compliance behaviour (Richardson, 2005a). That study reveals five underlying dimensions of fairness perceptions including: general fairness, exchange with government, special provision, tax rate structure and self-interest. In Hong Kong, six dimensions of fairness were reported in a survey among postgraduate students (Richardson, 2006b). The dimensions are: general fairness; tax rate structure; middle income earners' tax burden; exchange with the government; self-interest; and special

provisions for high income earners. In his extension to the research, Richardson (2005b) and Gilligan and Richardson (2005) made a cross-cultural comparison between the findings from Australia and Hong Kong, where several significant differences of opinion regarding the fairness perceptions were reported. Such differences were expected due to markedly different tax systems between the two countries, where Hong Kong applies a flat tax rate structure, no withholding tax, no self assessment system, and no tax on dividend and interest incomes (Richardson, 2005b).

Notwithstanding the importance of fairness in tax compliance behaviour, in New Zealand little research has been conducted in this area. To date, there have been two major studies on fairness perceptions undertaken in New Zealand (Hasseldine et al., 1994; Tan, 1998), but they were both conducted prior to the formal implementation of the current self assessment system. In their study on the association between fairness perceptions and tax evasion, Hasseldine et al. (1994) who surveyed individual taxpayers in Christchurch (through the use of Electroral Roll in the area) claim that taxpayers generally perceived the tax system to be unfair. In this study, fairness perceptions were measured by two items, that is, fairness on the overall income tax system and fairness of tax amnesty. The latter study by Tan (1998), focused on three dimensions of fairness perceptions labelled as: personal fairness; fairness of the tax burden; and fairness of the tax rate

structure. That study, which involved both full-time and part-time university students, further documented personal fairness to be the most important dimension in forming fairness perceptions.

Similar to New Zealand, there is also limited literature on fairness perceptions in Malaysia with the exception of studies undertaken by Azmi and Perumal (2008) and Mustafa (1996). A study by Mustafa (1996) which compares the fairness perceptions between city-taxpayers and non-city taxpayers indicates that non-city taxpayers had better fairness perceptions than the city-taxpayers. However, this study was conducted during the official assessment system (OAS). A more recent study on fairness perceptions was undertaken by Azmi and Perumal (2008), who attempted to identify the fairness dimensions among Malaysian taxpayers by replicating Gerbing's (1988) questionnaire. Their study which is limited to registered individual taxpayers in four Inland Revenue offices in Kuala Lumpur suggests that Malaysian taxpayers perceive the fairness of the income tax system in terms of general fairness, tax structure and self-interest. These dimensions of fairness, which are identified through a factor analysis, are slightly different from those documented in the US (Gerbing, 1988), and Australia and Hong Kong (Gilligan & Richardson, 2005; and Richardson, 2005b).

The multi-dimensional perceptions of fairness are not limited to the direct tax only but also extended to the area of indirect tax. This is empirically established by Takenishi and Takenishi (1990) who revealed that fairness judgment is multi-dimensional. By using multiple regression analysis, the researchers found that procedural fairness, outcome evaluation and affective responses,[38] made up the fairness judgment of the consumption tax among Japanese citizens (Takenishi & Takenishi, 1990).

With regard to the level of fairness perceptions, a comparative fairness perception study (which is not related to tax), undertaken in Singapore and China to observe how people across different regions form their fairness judgments, found that people in a more developed region and living in a more competitive society will be more tolerant of social unfairness (Zhiyong & Qingyang, 2007). Assuming a similar association exists in the context of taxation, arguably, taxpayers in New Zealand (which is a developed country) as opposed to Malaysia (a developing country), might be more tolerant in their fairness perceptions compared to the Malaysian taxpayers. However, the researchers also suggest that, in the case of an environment filled with reward and punishment (where the income tax system can be considered as one of the legalised environments, with various penalties), such fairness perceptions remain approximately the

[38] This refers to emotion-based attitude, which is the opposite of cognitive attitude (value-based).

same, irrespective of the regions and economic backgrounds (Zhiyong & Qingyang, 2007).

While such a contention is yet to be tested in this study, empirical findings from previous studies indicate that taxpayers from different countries have dissimilar levels of fairness perceptions towards their respective income tax system. For instance, a comparative study conducted in Hong Kong and Australia by Gilligan and Richardson (2005) and Richardson (2005b), revealed that there were several significant differences of fairness perceptions on their income tax system, particularly in terms of general fairness, special provisions, tax rate structure and self-interest. It was argued that such differences were due to the different nature of the income tax systems implemented between the two countries. While Richardson (2005a; 2005b; 2006b) investigate perceptions on various dimensions of fairness, McKerchar (2003) measures personal taxpayers fairness perceptions based on their ratings on the Australian income tax system. From the survey, it is indicated that more than 60 percent of the personal taxpayers who completed their own return forms perceived that tax system to be unfair.

In the US, Etzioni (1986), who measured fairness perceptions in terms of the tax rate over 14 years (from 1961 to 1980), found that the American taxpayers had increasingly perceived the tax system as unfair. Meanwhile,

a study on Dutch taxpayers (who were selected using marketing bureau, and surveyed either through internet or face-to-face interview) on distributive fairness (which is measured by one item) suggests that they perceived the tax system as moderately fair (Verboon & Dijke, 2007). However, when another survey was undertaken using five items to measure distributive fairness, the taxpayers' fairness perceptions of the income tax system declined (Verboon & Dijke, 2007). Apart from the different measures used, the contradicting results may also due to the different sample selection used in this study where it was concentrated on Dutch employees who worked for at least eight hours a week.

In New Zealand Tan (1998) concludes that the taxpayers perceived the income tax system as quite fair to them personally. This result partly indicates that there is an improvement to the income tax system, as previously Hasseldine et al. (1994) suggest that taxpayers completely perceived the system as unfair. However, Tan (1998) also claims that taxpayers were not happy with the unfairly distributed tax burden, a relatively flat tax rate structure, and unfair treatment between the wealthy and middle income earners.[39] A survey of Malaysian taxpayers, on the other hand, indicates that taxpayers perceived the income tax system as moderately fair (Azmi & Perumal, 2008). While previous studies indicate

[39] In this study, taxpayers claimed that the wealthy are able to enjoy special deductions while middle income earners have to pay more than their fair share.

the difference in fairness perceptions between the countries, it is difficult to directly compare the fairness perceptions due to differences in tax jurisdictions, time period, methods adopted, sample selection and measures used in each study.

2.5.2 Studies on Tax Compliance Behaviour

According to James and Alley (2002, p. 32), tax compliance refers to the willingness of individuals to act in accordance within both the 'spirit' and the 'letter' of the tax law and administration without the application of enforcement activity. In this study, tax compliance is assumed to take place when the taxpayer files all required tax returns at the proper time and that returns accurately report tax liability in accordance with the tax law applicable at the time the return is filed. This definition is adopted from Roth et al. (1989), as it provides a better definition when compared to the definition used by Jackson and Milliron (1986) (Richardson & Sawyer, 2001).

As there are various definitions of noncompliance, previous studies have also developed different measures of noncompliance behaviour. For example, Yankelovich et al. (1984) develop the 15-item tax non-compliance scale which include a number of possible ways of taxpayers to under-report incomes and overstate deductions in calculating their tax liabilities. This scale was adopted in Richardson (2005b) on the cross

cultural study between Hong Kong and Australia, where the findings indicate that Australian taxpayers are generally more compliant that the Hong Kong taxpayers. Bobek et al. (2007), on the other hand, use a hypothetical tax scenario in their experimental study to investigate the taxpayers' noncompliance behaviour in the US, Australia and Singapore. Results indicate that Singaporean taxpayers had the lowest noncompliance rate at almost 26 percent, while Australian taxpayers had the highest at 45 percent. The findings further suggest that complete compliance was highest in Singapore (54 percent) and lowest in Australia (30 percent). The US is in the middle in terms of both the compliance and noncompliance rates.

Belkaoui (2004), in his study on thirty countries, measures the level of tax compliance using the index that varies from 0 to 6, where higher scores indicate higher compliance. In this study, New Zealand was ranked the second most compliant after Singapore. This is followed by Australia, the United Kingdom (UK) and Hong Kong. Malaysia was ranked eighth, after the US, while Italy was considered to be the least compliant. A review of the above-mentioned studies provides useful information to the researcher on the level of compliance behaviour across countries. However, studies on compliance behaviour would be less meaningful without investigating the potential factors leading to such a behaviour. This is shown from previous studies where various attempts have been made by the researchers to unfold the phenomenon of noncompliance behaviour among taxpayers.

The motivation to understand why taxpayers do or do not comply led to numerous further research in this area, cutting across various disciplines such as accounting, economics, political science, public administration and psychology (Kasipillai & Jabbar, 2003). Such an understanding is vital in order to obtain greater levels of tax compliance and bridge the tax gap effectively (Department of the Treasury, 2007). Jackson and Milliron (1986), in their earlier review of 43 tax compliance studies undertaken from 1974 to 1985, identify fourteen key variables of compliance behaviour, which include: age; gender; education; income level; income source; occupation; peer influence; ethics; fairness; complexity; tax authority contact; sanctions; probability of detection; and tax rates. In relation to the identified variables, the authors further suggest that more research on the impact of ethics, fairness, complexity, probability of detection and tax rates on compliance behaviour is needed in the future. Thereafter, following Jackson and Milliron's (1986) recommendations, these variables have received significantly greater attention since 1985 (Richardson & Sawyer, 2001).

To extend the work of Jackson and Milliron (1986), Richardson and Sawyer (2001) continued with the review of past studies beginning from 1986 to 1997 where they emphasise that while studies on the relationship between fairness perceptions and compliance behaviour have been growing, they fail to provide conclusive results. They point out that while

some studies prove a significant positive relationship between fairness perceptions and compliance behaviour, others find no evidence of such effects. A positive relationship between tax fairness and tax compliance is demonstrated through survey data from 1960-1980 by Etzioni (1986), who documented that the fairness perception is more likely to affect tax compliance rather than tax rates. Other studies also confirmed that fairness perceptions influence tax compliance behaviour (for example, Efebera et al., 2004; Roth et al., 1989; Turman, 1995). Similarly, Harris (1989), Hite and Roberts (1992), Porcano and Price (1992), Roberts (1994), and Song and Yarbrough (1978), found tax compliance to be significantly associated with perceptions of an improved tax system.

A recent cross-cultural study by Richardson (2005b) on tax fairness perceptions and tax compliance behaviour in Australia and Hong Kong documented that tax fairness perceptions about general fairness have a significant impact on tax compliance behaviour in both countries. Additionally, in Australia, it was found that tax fairness perceptions about special provisions, tax rate structure and self interest have some significant relationships with tax compliance behaviour. In his preliminary study in Australia, Richardson (2005a) concludes that tax fairness is multi-dimensional and has varying effects on compliance behaviour. In Malaysia, an exploratory study by Loo and McKerchar (2010), using sixty individual taxpayers, also provides preliminary evidence of a positive

relationship between fairness perceptions (particularly vertical fairness) and compliance behaviour.

As noted earlier, Richardson and Sawyer (2001) also highlighted some studies which found no evidence of any association between fairness perceptions and compliance (for example, Coleman, 1997; Porcano, 1988; Roberts & Hite, 1994). In addition to this, Bobek's (1997) study, investigating the role of fairness perceptions, also failed to establish the direct link between fairness and compliance behaviour. The results, however, do not indicate there is little importance in fairness perceptions because such perceptions had an effect on moral obligations and subjective norms which consequently affect compliance behaviour. Similarly, Hasseldine et al. (1994), in their study on New Zealand taxpayers, also found no significant association between taxpayers' fairness perceptions and non-compliance behaviour, notwithstanding the subjects' unfavourable perceptions of the tax system. Interestingly, there are also several studies which provide evidence of a negative association between fairness perceptions and compliance behaviour (for details, see Richardson & Sawyer, 2001). This is probably due to the non-compliant taxpayers' perceptions that the tax system appears to be fair as a result of their non-complying behaviour (Lempert, 1992).

2.5.3 Studies on Tax Knowledge

Tax knowledge is an essential element in a voluntary compliance tax system (Kasipillai, 2000), particularly in determining an accurate tax liability (Palil, 2005; Saad et al., 2003). More recent studies undertaken in Malaysia (Loo, 2006; Loo et al., 2008; 2009) also suggest tax knowledge to be the most influential factor to determine taxpayers' compliance behaviour under the self-assessment system. This is empirically established by several other studies (for example, Kasipillai et al., 2003; Kirchler et al., 2006), which document that possessing tax knowledge will lead to higher compliance rates.

On the contrary, the absence of tax knowledge may lead to non-compliance behaviour among taxpayers, either intentionally or unintentionally. This is postulated by McKerchar (1995) who studied small business taxpayers in Australia. She suggests that small business taxpayers are not even aware of their tax knowledge shortfall and this may lead to unintentional non-compliance behaviour. Such evidence was also documented among individual taxpayers in Malaysia who unintentionally committed mistakes in their tax return forms (Loo et al., 2008). In this study, a mixed method design was used by conducting mail survey, quasi-experiment and case study concurrently between November 2005 and July 2005.

The abovementioned studies, which indicate a positive relationship between tax knowledge and compliance behaviour, however, are not consistent with an earlier study by Harris (1989), who claimed that tax knowledge has no direct significant effect on taxpayers' compliance behaviour. One possible explanation for such inconsistent results is the difference in tax jurisdictions. The studies mentioned above were either conducted in Malaysia or Australia, while this study was conducted in the US. Another potential reason may be that the different measures were used in the studies.

Harris (1989) further claims that tax knowledge had an indirect effect on compliance behaviour through fairness perceptions. In that study, Harris (1989) separated tax knowledge into fiscal awareness and technical knowledge, and observed the impact of each type of knowledge on fairness perceptions. The findings show that the types of tax knowledge impact on fairness perceptions and consequently compliance behaviour.

The influence of tax knowledge on fairness perceptions was further documented by Schisler (1995) who carried out a study comparing tax preparers and taxpayers. Taxpayers were selected amongst MBA students with at least five years working experience while tax preparers comprised of tax practitioners from certified public accountant (CPA) firms in the US. Based on the analysis, he found that taxpayers have significantly lower

fairness perceptions compared to tax preparers. The result might be due to the absence of tax knowledge among taxpayers compared to tax preparers. Fallan (1999) later confirmed these findings that tax knowledge significantly changed attitudes towards the fairness of the tax system. In that experimental study, the author measured tax knowledge through an additive index of 12 questions concerning tax allowances and tax liabilities.

Consistent with the findings of Schisler (1995) and Fallan (1999), some other studies also indicate that an increase in tax knowledge strengthens taxpayers' perceptions about the fairness of the income tax system (see Christensen et al., 2000; Eriksen & Fallan, 1996; Maroney et al., 2002). However, Loo et al. (2008), who conducted a study in a Malaysian environment, reveal a contradictory finding to the general contention, where they documented that increases in taxpayers' knowledge would have a negative impact on their perceptions on exchange fairness. In this respect, individual taxpayers with good knowledge of tax felt that they are not receiving their fair share of benefits funded by tax revenue. While the benefits have been provided in terms of public facilities such as free education and subsidised health system, the fact that the detailed information on the source of expenditure are not publicly available may have created this negative perceptions on the fairness of the income tax system in Malaysia.

In New Zealand environment, inconsistent results with the previous studies on the relationship between tax knowledge and fairness perceptions were documented by Tan and Chin-Fatt (2000). The study which involved tertiary students who enrolled in an introductory taxation course revealed no significant impact of increased tax knowledge on fairness perceptions. In this study, the researcher believes that the use of university students as a proxy for actual taxpayers may to certain extent explain such contradictory findings.

To extend the studies on tax knowledge and fairness perceptions, researchers have investigated possible ways to improve tax knowledge among taxpayers, and consequently their fairness perceptions. For instance, White et al. (1990), in their experimental study on tax students, suggested that a formal class in taxation would enhance their knowledge about the law and appreciation of fiscal policy goals, thus increasing perceived fairness. This study is supported by Wartick (1994), who claimed that exposure of information during a tax law change will improve taxpayers' knowledge, and subsequently mitigate their perceptions that the tax system is unfair.

Apart from the impact of tax knowledge and fairness perceptions, a review of previous studies also provides overall picture of taxpayers' level of knowledge in several countries. While it is not appropriate to compare the

findings (due to different measures used, different times, different tax jurisdictions and nature of the study), the information would be useful for the researcher to have a general understanding of taxpayers' knowledge of taxation as a whole. For instance, a study in Malaysian environment conducted by Loo and Ho (2005) suggests that a large majority of taxpayers possess relatively low knowledge of taxation, notwithstanding their tax filing experiences. This finding is, however, not supported by Kamaluddin and Madi (2005) and Madi et al. (2010) who claim that Malaysian taxpayers are generally tax literate. One possible explanation for the contrasting results could be the different items used to measure tax knowledge between studies.

In relation to this finding, Ahmad et al. (2006) conducted an experimental study in Malaysia and documented that taxpayers receiving formal tax education have significantly better tax knowledge compared to those without such education. In that study, Ahmad et al. (2006) use postgraduate students who are also taxpayers to form the experimental and the control group. The difference between the groups is that the control group did not take the taxation course in their study, while the experimental group did. The findings are consistent and therefore provide support to Fallan (1999) who carried out a similar experimental study overseas.

Instead of focusing on taxpayers, Coetzee and Oberholzer (2009) studied the tax practitioners in South Africa to gauge their perceptions on the trainees' tax knowledge. The results reveal that majority of tax practitioners (about 85 percent) believed that trainees mainly have general knowledge and also a working knowledge of individual income tax. It is not surprising that they possess such a good tax knowledge as the trainees are the future tax professionals who will be assisting less specialist taxpayers. It is expected of such trainees to possess such a high level of knowledge, as suggested by tax practitioners and educators (Tan & Veal, 2005).

2.5.4 Studies on Tax Complexity

Tax complexity arises due to the increased sophisticatication in the tax law (Richardson & Sawyer, 2001). Tax complexity can take many forms such as computational complexity, forms complexity (American Institute of Certified Public Accountants, 1992), compliance complexity, rule complexity (Carnes & Cuccia, 1996), procedural complexity (Cox & Eger, 2006) and the low level of readability (Pau et al., 2007; Richardson & Sawyer, 1998; Saw & Sawyer, 2010; Tan & Tower, 1992).

A review on tax complexity in a comparative study of seven countries by Strader and Fogliasso (1989) suggests that Japan, the UK, France, Italy and the US, all have highly complex tax systems. Only Sweden and

Netherlands are considered to have a moderately complex tax system. In New Zealand, various tax reforms have been made since the mid 1980s to overcome the complexity of the tax system (for details, see Hasseldine & Bebbington, 1991). However, Tan and Tower (1992) claim that the efforts made by the tax authority at that time to simplify the tax law failed. In their study, the authors applied the Flesch Reading Ease Index to measure the readability level of New Zealand tax legislation, Tax Information Bulletins (TIBs) and Tax Return Guides. The Flesch Reading Ease Index measures the difficulty ranging from zero (most difficult) to 100 (least difficult). Their findings indicated that there was no progress with simplification at that time, except for the Tax Return Guides. Tan and Tower (1992) recommend that shorter sentences and an active style of writing will help improve the readability of tax legislation and consequently reduce the complexity of the tax law.

A more recent study by Pau et al. (2007), however, provides contrary evidence on tax simplification in New Zealand. The researchers test the effectiveness of the newly written Income Tax Act 2004,[40] TIBs and binding rulings using readability measures, namely the Flesch Reading Ease Index, Flesch-Kincaid Grade Level Index, average sentence length and percentage of passive sentences. They found significant improvements

[40] This new legislation contains further changes made to Parts A and B, the rewritten sections of Parts C, D and E with re-enactment of the other parts (Pau et al., 2007).

in respect of tax simplicity through these measures. Sawyer (2007) agrees that there have been some improvements in tax simplification but continual change to the legislation has to a certain extent delayed the rewrite programme (and also delayed the benefits).[41]

As an extension to the previous studies (Pau et al., 2007; Richardson & Sawyer, 1998; Tan & Tower, 1992), Saw and Sawyer (2010) recently examine the readability of a sample of the selected sections of the Income Tax Act 2007, TIBs and binding rulings using similar measures as in Pau et al. (2007). Overall the results suggest further significant success to the rewrite project, undertaken by the New Zealand government in its tax simplicity goals in the context of improved readability. Interestingly, the Income Tax Act 2007 appears to be more readable compared to either binding rulings or TIBs, although these tax-related materials are supposed to be the explanatory materials. Following this rewrite project, the results of this study also indicate that the percentage of people with an education level of Years 11-13 to understand the Income Tax Act 2007 has significantly increased.

In Malaysia, Mustafa (1996), who studied taxpayers' perceptions towards the self-assessment system which was to be introduced (at that time),

[41] The rewrite programme started in 1993 and the final stage was completed when legislation was passed by the New Zealand Parliament on October 25, 2007 (Sawyer, 2007).

suggests the presence of tax complexity in Malaysia, particularly in terms of record-keeping, too much detail in the tax law and ambiguity. The findings are partly consistent with the six potential causes of complexity labelled as: ambiguity, calculations, changes, details, forms and record keeping, identified by Long and Swingen (1987). Such complexity is also present in Australia where it forces taxpayers to engage tax agents to deal with their tax matters (McKerchar, 2001; 2003). McKerchar (2003) further identified the most common problem faced by taxpayers is to understand the instructions in the Taxpack 2000. This is followed by the problems of understanding the rules, the tax return forms and other relevant written information provided by the tax authority.

Richardson (2006a), in his research on 45 countries, finds that complexity is the most important determinant of non-compliance, apart from education, income source, fairness and tax morale. His findings are consistent with Cox and Eger (2006) who focus on the State Road Funds in the US State of Kentucky. The authors found that procedural tax complexity contributes to an increase in tax non-compliance. In Australia, McKerchar (2005), who carried out a survey among tax agents, notes that tax agents are not happy with the increasing complexity of the tax law. She further claims that the tax agents desire a much simpler tax law, with less regulatory material and ad-hoc change. Similar findings were documented

by Kirchler et al. (2006) who found that taxpayers were more likely to comply when the tax law was perceived as less complex.

With regard to fairness, some researchers agree that a certain degree of complexity in the income tax system is necessary to ensure the system is fair (for example, Forest & Sheffrin, 2002). This particularly represents the perceptions of the tax authority and tax professionals, as suggested by White (1990). Applying four scenarios of tax complexity,[42] White (1990) asserts that both the tax authority and tax professionals (tax lawyers and tax accountants) prefer complexity in the tax law but at different levels. The tax authority prefers tax complexity that will increase their probability of winning cases in disputes, while tax lawyers, on the other hand, are in favour of tax complexity that gives rise to a higher probability that the taxpayers will win the case.[43] Similarly, tax accountants' preferences are also towards a high level of tax complexity as it will increase the demand for their tax services. Despite these differing levels of desired complexity, the ultimate goal of the tax authority and tax professionals is to earn as much fee income as possible from taxpayers. Thus, undoubtedly, taxpayers do not support tax law complexity.

[42] In these scenarios, the tax authority's probability of winning from the perspective of the taxpayer and tax authority is represented by a line intersection.

[43] Tax lawyers prefer to go to trial while the tax authority favours settlement at the stage of audit.

In addition to the four scenarios of complexity, Sawyer (1996b) claims that there are another two models of change in tax complexity that are worth discussing; that is, the eventual divergence of probabilities and eventual convergence of probabilities. Based on the models, Sawyer (1996b) found contradicting evidence with regard to tax authority's preferences. His analysis shows that while one scenario suggests that the tax authority prefers a lower level of tax complexity than indicated in White (1990), another scenario indicates that the tax authority will benefit most when the level of complexity is close to zero.

Notwithstanding preferences by the tax authority and tax professionals, tax complexity actually causes disappointment and consequently negative perceptions of fairness among taxpayers (Carrol, 1987; Cialdini, 1989). Milliron (1985) claims, in a study of jurors, that the participants viewed complexity and fairness as distinct but incompatible features of the income tax system. In their study on Australian taxpayers and tax officers, Kirchler et al. (2006) claim that complexity in tax law results in a negative perception of the tax system and consequently encourages an unwillingness to comply.

Carnes and Cuccia (1996), and Kirchler et al. (2006), also share similar views on the inverse relationship between complexity and fairness perceptions. In that respect, however, Carnes and Cuccia (1996) further

argued that such association might be perfectly true in the case of 'unnecessary complexity', but not on 'justified complexity', where the perceived justification may moderate the effect of 'justified complexity' on fairness perceptions. In Carnes and Cuccia (1996), the authors provide evidence of the weakening effect of complexity on fairness perceptions when the perceived justification increases.

2.5.5 Attitudes towards Compliance

Attitudes toward behaviour is one important element of the TPB. In the context of tax compliance studies, atttitudes towards behaviour are normally refer to attitudes toward compliance with tax obligations. The importance of attitudes in determining tax compliance is evident in a review of three apporaches[44] to taxpayers' decision-making, whether or not to comply, by Cullis and Lewis (1997). In their study, the authors conclude that the values, attitudes, perceptions and morals of the taxpayers are of paramount importance. They particularly state that tax compliance will be relatively high when attitudes towards compliance are favourable. This is consistent with Hanno and Violette (1996) who empirically establish the positive link between attitude toward tax compliance and compliance behaviour. Adopting the TRA the authors conducted an experimental

[44] The three approaches are the conventional economic approach, psychology approach and a mix of economic and psychology, termed as the economic psychology approach.

design among 73 College students who have experience in filing tax returns.

In Canada, Trivedi et al. (2005) use the TPB model to investigate the suitability of the model in explaining tax compliance behaviour. Utilising both survey and experimental design among University students, they found attitude has a significant impact to taxpayers' decision-making. In that study, the authors investigate the role of attitude in both compliance and non-compliance behaviour decisions and results suggest that attitude is important in both situations. The findings provide support to Elffers et al.'s (1987) work that exhibits a positive relationship between attitude towards compliance and intention to comply. In Malaysia, Kasipillai and Jabbar (2003) claim that, in relation to income reporting behaviour, attitude towards compliance was statistically significant. A more recent study, adopting mixed method designs of survey, experiment and case study generally found that taxpayers with favourable attitudes would be more compliant (Loo et al., 2008; 2009). Interestingly, the study further diffentiates taxpayers' attitudes into two aspects and they have contradicting effects on compliance behaviour. While taxpayers' attitude in respect of their confidence in handling the tax matters have a positive association with compliance behaviour, taxpayers' attitude toward the administration of the tax system, on the other hand, has a negative impact on compliance behaviour.

Apart from investigating the impact on compliance behaviour, there are some other studies which, on the other hand, examine the factors forming taxpayers' attitude, which, among others, include trust, pride (Torgler & Schneider, 2005), culture (Torgler & Schneider, 2004), education (Hasseldine & Bebbington, 1991), and fairness (Devos, 2009; Feld & Frey, 2007; Roberts, 1994; Taylor, 2001). While those factors are undeniably important, this present study is interested on focusing on the impact of fairness perceptions on attitudes toward compliance. In this respect, Taylor (2001) asserts that negative perceptions on the income tax system (particularly, in terms of procedural fairness) will consequently result in taxpayers' negative attitudes towards compliance. A more recent work by Devos (2009) in Australia, through both survey and interviews, strongly supports the notion that perceptions of fairness of the income tax system is an influential factor in determining attitudes towards compliance.

Using an experimental approach, Roberts (1994) demonstrates how public service announcements will improve fairness perceptions on the income tax system and consequently improve attitudes towards compliance. In addition, the study suggests that the cognitive public service announcement is significantly more effective than the affective approach in influencing fairness perceptions.

2.5.6 Subjective Norms

Subjective norms are said to be an important factor that result in different compliance behaviour across countries (Alm et al., 1995). Meanwhile, Cialdini and Trost (1998) consider subjective norms as one aspect of social norms, in addition to the other three categories, namely: descriptive norms; injunctive norms; and personal norms. Descriptive norms are defined as standards developed based on observations of actual behaviours of others, while injuctive norms, on the other hand, specify what should be done. Subjective norms relate specifically to the expectation of others and personal norms are one's own self-based standards (Bobek et al., 2007). Although by definition, they are different, Bobek et al. (2007) found that these four dimensions are actually correlated.

Contrary to Cialdini and Trost (1998), Ajzen (2006) defines subjective norms as including injunctive and descriptive. In his argument, Ajzen (2006) posits that in order to capture the domain of subjective norms, the research instrument needs to measure both injunctive and descriptive aspects. Notwithstanding different opinions on subjective norms, Bobek (1997), Elffers et al. (1987), and Hanno and Violette (1996), documented a positive relationship between subjective norms and compliance behaviour. Such a relationship was also documented in Canada by Trivedi et al. (2005) in the case of compliance behaviour but not in the non-compliance situation. In a cross-cultural study in Australia, Singapore and the US,

Bobek et al. (2007) conclude that personal norms and subjective norms are the most influential factor of compliance behaviour. The results, particularly with regard to Australia, however, are inconsistent with Kirchler et al. (2006), who failed to establish such a significant relationship. This is probably due to the limited items used to measure subjective norms in this study, compared to the one used in Bobek et al. (2007).

2.5.7 Perceived Behavioural Control

Perceived behavioural control is another element of TPB. As indicated earlier, perceived behavioural control can either directly affect actual behaviour, or through behavioural intention and consequently actual behaviour. Perceived behavioural control is not widely tested in tax compliance behaviour studies either as an independent variable or in a full compliance model. This does make sense because not many studies adopt TPB to explain tax compliance behaviour. From the few studies investigating the role of perceived behavioural control in tax compliance behaviour, both Trivedi et al. (2005) and Bobek (1997) found that no significant relationship exists. However, Bobek (1997) notes that perceived behavioural control does interact with subjective norms, to significantly influence intention to comply.

In addition to the limited study on the effect of perceived behavioural control in tax compliance behaviour, to the researcher's knowledge, there is also no study to date that investigates the role of tax knowledge and tax complexity on perceived behavioural control. However, Liska (1984) generally posits that an individual's unvolitional behaviour depends on perceived behavioural control, which in turn is determined by the resources, skills, and obstacles. This contention, in other words, suggests that tax knowledge (resources and skills) and tax complexity (obstacles), may influence perceived behavioural control of taxpayers, which in turn affects their decision whether to comply or not.

2.6 Summary

This chapter describes the relevant theories, including Equity Theory, Distributive Justice Theory (DJT), Procedural Justice Theory (PJT), the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB) that form the background of this study. Based on the discussion, the extension to Equity Theory and the TPB are considered appropriate to explain the tax compliance behaviour in New Zealand and Malaysia. Briefly, the extended Equity Theory (which embedded DJT and PJT) asserts that individuals normally form their overall fairness judgments on any particular system by referring to their views on reciprocal fairness, distributive fairness and procedural fairness. When they have positive perceptions on these dimensions of fairness, the likelihood to have a fair

judgment on the system in context will be high, and vice versa. Accordingly, judgment so formed will then influence their behavioural intentions.

In relation to the TPB, this behavioural theory is also used to predict an individual's behavioural intention. The TPB proposes attitude towards behaviour, subjective norms and perceived behavioural control as antecedents to behavioural intention, and consequently actual behaviour. The decision to adopt the TPB over the TRA (which disregards the perceived behavioural control factor) is mainly due to the nature of tax compliance behaviour, which is not fully volitional.

A review of past studies on tax fairness, tax compliance behaviour, tax knowledge, tax complexity, and variables under the TPB indicate mixed but interesting findings. For instance, while the proposition under the Equity Theory that fairness perceptions have positive association with compliance behaviour are mainly supported by empirical work, there are a few studies which document contrary evidence. Such inconsistent findings might be partly attributable to the different definitions of fairness adopted in these studies. This encourages the researcher to consider various dimensions of fairness possible to capture a more comprehensive definition of fairness. In sum, a review of the empirical literature provides an avenue

for the researcher to present the conceptual framework of the study as well as formulate the relevant hypotheses in the following chapter.

Chapter 3

Conceptual Framework and Hypotheses Development

3.1 Introduction

This chapter presents the detailed development of the conceptual framework of this study. This is followed by a discussion on the development of the hypotheses, where two categories of hypotheses, namely preliminary hypotheses and primary hypotheses, are presented.

3.2 The Proposed Conceptual Framework

This research develops a conceptual framework to investigate the relationship between fairness perceptions, together with other external factors, and compliance behaviour. While there are a substantial number of compliance studies undertaken to date, this study attempts to identify the role of fairness perceptions in taxpayers' decision-making whether or not to comply with their tax obligations. For that purpose, a review of literature of Equity Theory (incorporating the Distributive Justice Theory (DJT) and Procedural Justice Theory (PJT)) was made. The two important premises drawn from Equity Theory are: (1) fairness perceptions are multi-dimensional; and (2) fairness perceptions have a positive relationship with behavioural intention and consequently actual behaviour. Although these contentions are well supported by previous empirical findings (for example, Bordignon, 1993; Etzioni, 1986; Gilligan & Richardson, 2005) it

is important to note that fairness perceptions is only one of the various factors affecting an individual's behaviour (Ajzen, 1982).

The researcher considers a review of the Theory of Planned Behaviour (TPB), which is one of the established behavioural models, to further investigate taxpayers' compliance behaviour. Drawing from the past literature, the TPB has clearly been successful in explaining ethical and unethical behaviours across various disciplines. The TPB posits that attitudes, subjective norms and perceived behavioural control are the antecedents for behavioural intention, and consequently actual behaviour. Additionally, the TPB also suggests that perceived behavioural control also has a direct link to actual behaviour.

In short, a review of Equity Theory and TPB indicates that both lead to establishing the antecedents of behavioural intention and consequently actual behaviour. Based on that understanding, the premises utilised in both theories are combined in order to investigate the effect of fairness perceptions, attitudes towards compliance, subjective norms and perceived behavioural control, on compliance behaviour. Due to the difficulty in obtaining information on actual tax compliance behaviour (which is regarded as a sensitive issue to taxpayers), this study adopts the intention to comply as a proxy for actual compliance. Such a practice is not uncommon in application of the TPB (for example, Blanchard et al., 2008;

French et al., 2005; Paris & Broucke, 2008; Simsekoglu & Lajunen, 2008; Warner & Aberg, 2008), and in fact, previous studies have empirically demonstrated a strong link between behavioural intention and actual behaviour (for example, Kraft et al., 2005; Rhodes et al., 2007; Sheppard et al., 1988).

In addition to the elements in Equity Theory and the TPB, the model developed and utilised in this study includes two other variables that are considered important: tax knowledge, and tax complexity. These two factors are believed to play a significant role in taxpayers' fairness perceptions of the income tax system and consequently their compliance behaviour. Several overseas studies had empirically established such an influence to a degree (see, for example, Fallan, 1999; Harris, 1989; Kirchler et al., 2006). Similarly, the earlier discussion on the TPB in Chapter 2 also indicates that an individual's perceived behavioural control is closely related to skills, knowledge, obstacles and assistance from others. Having said that, it is essential to investigate the effect of tax knowledge (which is the source of a person's skills and knowledge) and tax complexity (obstacles or difficulty) on perceived behavioural control.

Although the factors mentioned above have been investigated in previous studies, this study is different in several ways. First, while most studies on fairness perceptions have been exploratory in nature, this study attempts to

confirm the various dimensions of fairness that are important to taxpayers' judgments. It is believed that there is a need to apply such a confirmatory analysis of fairness perceptions, when empirical findings have suggested a number of possible dimensions, through exploratory factor analysis. Specifically, it is believed that confirmatory factor analysis, and not exploratory analysis, is appropriate to this study, given that:

(1) This is not the first study on fairness perceptions to use New Zealand and Malaysian taxpayers. Although previous studies in both New Zealand and Malaysia did not encompass every dimension of fairness as described in the present study, at least they provide preliminary evidence of the multi-dimensional nature of fairness perceptions (refer to Azmi & Perumal, 2008; Tan, 1998).

(2) The questionnaires used in this study are carefully developed based on the review from the established theories and past studies.

(3) A usable sample size requirement of at least 200 was achieved so as to be able to use structural equation modelling (SEM), which is a confirmatory technique.

Second, notwithstanding the various dimensions of fairness perceptions, previous studies have dealt with only a limited number of dimensions. Specifically, in those studies, the researchers were interested in investigating the impact of horizontal fairnesss, vertical fairness, exchange fairness and tax rate structure on taxpayers' compliance behaviour. Little

attention is given to other dimensions of fairness, such as retributive fairness, even though it is actually considered to be a branch of DJT. Thus, drawing from Equity Theory and empirical findings, the researcher extends previous studies (for example, Christensen et al., 1994; Gerbing, 1988; Hasseldine et al., 1994; Kirchler et al., 2006; Richardson, 2005a; 2005b; 2006b; Tan, 1998; Turman, 1995) by considering seven important dimensions of fairness in the first order factor model, in order to confirm that taxpayers form their fairness perceptions based on these dimensions. Thereafter, the second order factor model is adopted where all dimensions are combined to form the overall fairness perceptions, and the effect of such perceptions on tax compliance behaviour are examined. Details of the first order factor model and the second order factor model are discussed in Chapter 4 which addresses research methodology.

Third, in relation to the measurement of the constructs, this study uses several measures to represent every construct in the model, which are regarded as complex concepts. This is important to ensure that the definitions of each construct are well represented by its measures, which consequently give a full picture of the constructs. For instance, if the concepts of attitude, subjective norms, perceived behavioural control and intention to comply, which relate to human judgment, are merely measured by an individual measure, it is unlikely that a single measure will encompass the whole domain of the constructs.

Fourth, previous studies (for example, Bobek, 1997; Etzioni, 1986; Hasseldine et al. 1994; Loo & McKerchar, 2010; Richardson, 2005a; 2005b; 2006b; Roberts, 1994; Roth et al., 1989; Turman, 1995) on the association between fairness perceptions and compliance behaviour, more often than not, use a single approach to explain such a relationship. Undeniably, such a mono-method (either through survey or experiment) has been fruitful. However, the call for the use of a mixed method approach in the tax compliance studies (for example, McKerchar, 2003; 2008) has been growing as it enables the researcher to either validate the findings or to provide more explanations to the phenomenon under study (McKerchar, 2003). With that in mind, this study integrates the quantitative (survey) and qualitative (in-depth interview) approaches sequentially in order to provide more explanations to the role of fairness perceptions in compliance behaviour. In other words, the in-depth interview approach is specifically intended to inform the findings from the survey approach, as indicated earlier in Chapter 1 (Section 1.7).

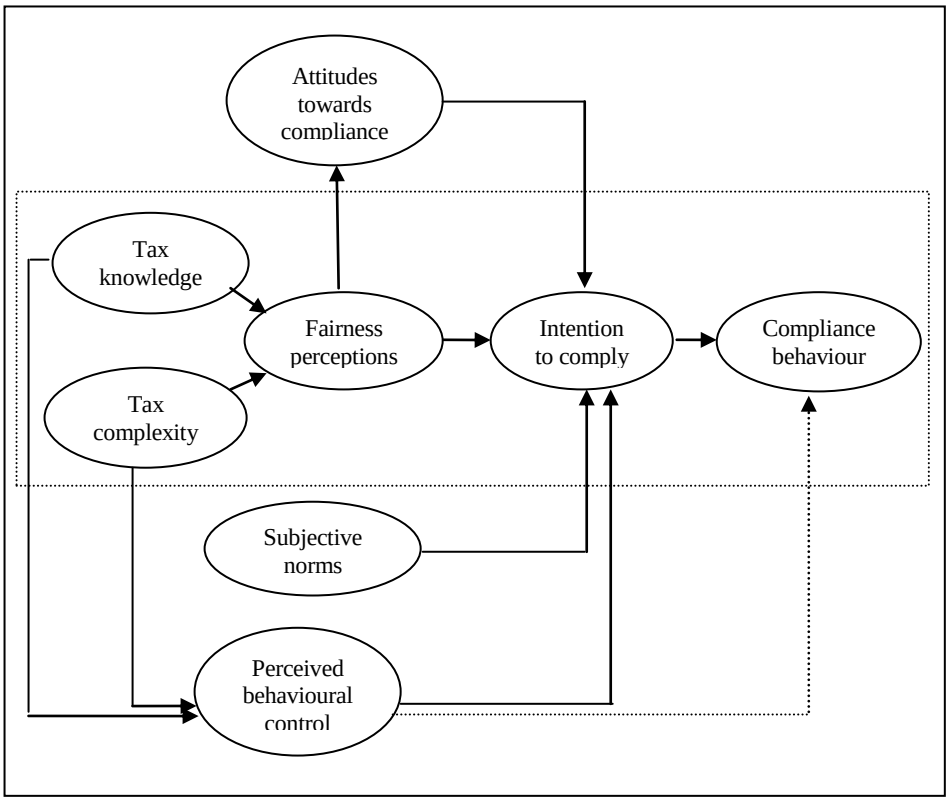
Fifth, the important role of tax knowledge and tax complexity on tax compliance behaviour has been shown in numerous studies (for example, Carnes & Cuccia, 1996; Cox & Eger, 2006; Kasipillai, 2000; Kasipillai et al., 2003; Long & Swingen, 1987; McKerchar, 1995; 2003; 2005; Mustafa, 1996; Palil, 2005; Richardson, 2006a). Rather than reinvestigating such a proven relationship, this study examines how tax knowledge and tax

complexity affect fairness perceptions and consequently compliance behaviour. In other words, the present study considers the fairness perceptions as moderating factors of tax knowledge and tax complexity with respect to intention to comply.

Sixth, while noting the fact that the variables under study have previously been independently tested, to the researcher's knowledge, this is the first study that develops a full conceptual model of compliance behaviour integrating Equity Theory, the TPB, tax knowledge and tax complexity variables. Bobek (1997), who previously combined Equity Theory (which specifically focuses on distributive fairness, procedural fairness and policy fairness) and the TPB to investigate taxpayers' compliance behaviour in the United States (US), considered moral obligation as an external variable to her tax compliance model. Other studies (Blanthorne & Kaplan, 2008; Hanno & Violette, 1996; Trivedi et al., 2005), adopted either the Theory of Reasoned Action (TRA) or the TPB, and other external factors, to explain taxpayers' compliance behaviour with no attention given to fairness perceptions. Last, but by no means least, this study compares fairness perceptions and compliance behaviour of individual taxpayers in New Zealand and Malaysia. To the researcher's knowledge, this is the first comparative study conducted in these two relatively rarely examined jurisdictions.

In short, the integration of Equity Theory, the TPB and the variables under review, as diagrammatically expressed in Figure 3.1, is expected to provide a richer understanding of the taxpayers' compliance behaviour, particularly in New Zealand and Malaysia.

Figure 3.1
Conceptual Framework of Fairness Perceptions and Compliance Behaviour



Notes:
Hypothesis path
Path not tested

Overall, this conceptual framework proposes that: (1) taxpayers' intention to comply depends on fairness perceptions, attitude towards compliance, subjective norms and perceived behavioural control; and (2) taxpayers'

fairness perceptions and perceived behavioural control are influenced by their levels of tax knowledge and the complexity of the tax system. Based on this conceptual framework, the research hypotheses are developed as discussed in the next section.

3.3 Hypotheses Development

Having developed the conceptual framework of taxpayers' compliance behaviour (as set out in Figure 3.1), it is essential to test the model in the 'real world'. To accomplish this objective, ten primary hypotheses (with two sub-hypotheses) were devised to investigate the validity of the model and the strength of the proposed relationships. The hypotheses were developed with reference to the findings from the review of the prior literature (as detailed out in Chapter 2). Prior to testing the primary hypotheses, it is equally important to develop and test the preliminary hypotheses that provide the foundation for the researcher to interpret the overall findings. As this is a comparative study, these preliminary hypotheses are used to compare the levels of fairness perceptions, tax knowledge, tax complexity and the elements in the TPB, in both New Zealand and Malaysia. These two categories of hypotheses are discussed in Subsections 3.3.1 and 3.3.2.

3.3.1 Preliminary Hypotheses

As indicated earlier, the preliminary hypotheses are developed mainly to investigate similarities or differences in opinion between taxpayers in New Zealand and Malaysia. While a few researchers have independently explored taxpayers' perceptions in New Zealand and Malaysia regarding fairness perceptions, tax knowledge and tax complexity, these findings do not provide the basis for comparison due to differences in time periods, measures used and methods of each study. Thus, using a similar research instrument, timeframe[45] and methods of analysis, this study is expected to provide valuable information to both countries as well as to the growing cross-cultural tax compliance literature.

For the purpose of this study, both the research questions and hypotheses are presented to enable readers to clearly understand the scope of the study. While preliminary hypotheses are developed in order to answer the research questions, the research questions are developed with reference to the research objectives set out in Chapter 1. In other words, the research objectives, research questions and hypotheses are interrelated. The four research questions and the relevant preliminary hypotheses are as follows:

[45] The survey in New Zealand and Malaysia was conducted between September and November 2008, and February to May 2009, respectively.

Research Question 1: Do taxpayers in both New Zealand and Malaysia have the same levels of fairness perceptions of their current income tax systems?

Hypothesis 1: There is no significant difference in fairness perceptions between New Zealand and Malaysian taxpayers of their current income tax systems.

Research Question 2: Do taxpayers in both New Zealand and Malaysia have the same levels of tax knowledge of their current income tax systems?

Hypothesis 2: There is no significant difference in the levels of knowledge between New Zealand and Malaysian taxpayers of their current income tax systems.

Research Question 3: Do taxpayers in both New Zealand and Malaysia have the same levels of perceptions of the complexity of their current income tax systems?

Hypothesis 3: There is no significant difference in the levels of perceptions of the complexity between New Zealand and Malaysian taxpayers of their current income tax systems.

Research Question 4: Do taxpayers in both New Zealand and Malaysia have the same levels of perceptions in relation to the TPB elements?

Hypothesis 4a: There is no significant difference in the levels of intention to comply, affective attitude, instrumental attitude, subjective norms and perceived behavioural control, between New Zealand and Malaysian taxpayers, in the 'overstating business expenses' scenario.

Hypothesis 4b: There is no significant difference in the levels of intention to comply, affective attitude, instrumental attitude, subjective norms and perceived behavioural control, between New Zealand and Malaysian taxpayers, in the 'understating other incomes' scenario.

All these hypotheses are expressed in null form as there is a limited or complete absence of literature available to conclude that taxpayers' perceptions differ between New Zealand and Malaysia. For instance, in the case of fairness perceptions, while both New Zealand and Malaysia have implemented a broadly similar income tax system in respect of the implementation of the self assessment system and progressive tax rates,[46]

[46] There are several differences in terms of the technical details of the implementation of the system. Also, the progressive tax rates in Malaysia are much lower than that of New Zealand. In 2010, Malaysia has twelve tax brackets for resident individual with the lowest rate of 1 percent and the highest rate being 26 percent.

taxpayers' fairness perceptions may be different because taxpayers come from different economic and cultural environments. Purely applying the findings documented in Zhiyong and Qingyang (2007), for example, that people in a developed economy will tolerate social unfairness, it is reasonable to anticipate better perceptions of fairness in New Zealand compared to Malaysia. However, on the basis that perceptions may be influenced by various factors, and with little evidence of fairness perceptions documented in these two jurisdictions, it is preferable to express the hypotheses in the null form. Similar issues apply with respect to other preliminary hypotheses. These hypotheses are tested using *t*-test analysis, and are described further in Chapter 4 and Chapter 5, regarding research methodology, and exploratory data analysis and results, respectively.

3.3.2 Primary Hypotheses

The primary hypotheses are discussed with reference to the conceptual framework set out in Figure 3.1. Similar to the preliminary hypotheses, the primary hypotheses are coupled with relevant research questions to enable readers to relate them to the research objectives of the study. To avoid confusion, the numbering of the hypotheses continues from the preliminary hypotheses. It is important to note that in this study the TPB elements are measured using two scenarios, namely overstating business expenses and understating other incomes. Thus, Hypotheses 6 to 14 will be

tested twice using the two scenarios in order to examine whether any differences exist between the scenarios.

3.3.2.1 Fairness Perceptions and Compliance Behaviour

The earlier review of various theories and studies of fairness suggests approximately ten dimensions of fairness (for example, Azmi & Perumal, 2008; Gerbing, 1988; Richardson, 2005a; 2005b; 2006b; Tan, 1998). However, in this study, seven dimensions are identified to be important in assessing the fairness of the income tax system. The dimensions are: general fairness; exchange fairness; horizontal fairness; vertical fairness (measured by ability to pay); retributive fairness; personal fairness; and administrative fairness.

General fairness relates to an overall fairness evaluation of the income tax system. Exchange fairness is concerned with reciprocal exchange between taxpayers and the government, while horizontal fairness deals with equal tax treatment among taxpayers in similar economic positions. Vertical fairness will be assessed based on the ability to pay principle and preference for tax rate structure, either a flat rate or progressive rates. Retributive fairness is concerned with the fairness of punishments imposed while personal fairness leads to individuals' judgments about whether the income tax system is favourable to them. Finally, administrative fairness relates to the content of the tax law (policy fairness) and procedures

employed by the tax authority (procedural fairness). A review of the literature also suggests that the multi-dimension of fairness perceptions is not limited to income tax (as indicated in the above-mentioned studies), but also applies to property taxes (Sirmans et al., 1995; Vlassenko, 2001) and indirect taxes (Takenishi & Takenishi, 1990).

While the research conducted to date has provided useful insights into various fairness dimensions, this study aims to extend the tax fairness literature by looking at both the New Zealand and Malaysian environments. In New Zealand, little research has been undertaken (Tan & Sawyer, 2003).[47] Such paucity of research is also demonstrated in Malaysia where only two studies on fairness perceptions have been undertaken so far.[48] Thus, this study proposes the following:

> Research Question 5: Do New Zealand and Malaysian taxpayers perceive the fairness of their income tax systems as being multi-dimensional?

---

[47] Tan (1998) carried out the main study of fairness in New Zealand. The author investigates the influence of demographic variables on fairness perceptions among university students and found that those with filing experience and older people perceive the progressive tax rate structure as fair. Notwithstanding the various dimensions of fairness, this study only concentrates on three dimensions of fairness namely personal fairness, tax rate structure and attitude towards taxes of the wealthy. Prior to that, Hasseldine et al. (1994) found that overall fairness perceptions have no significant association with taxpayers' non-compliance behaviour.

[48] Mustafa's study (1996) was conducted before the implementation of self assessment system and focused on limited elements of tax fairness. Azmi and Perumal (2008), on the other hand, replicated the work of Gerbing (1988) to explore the fairness perceptions of Malaysian taxpayers by administering a modified survey among personal taxpayers.

Hypothesis 5: New Zealand and Malaysian taxpayers perceive fairness of their income tax systems as being multi-dimensional.

Numerous studies have been undertaken since the 1970s to observe the role of fairness perceptions in taxpayers' decision-making of whether or not to comply. However, these studies provide mixed and inconclusive findings. While some researchers found a positive association between the variables, others could not support such findings. In fact, some studies indicate a negative relationship between fairness perceptions and compliance behaviour. Richardson and Sawyer (2001) contend that such mixed findings were probably due to different definitions of fairness perceptions used in the studies. Other researchers, have argued that such inconsistent results may be due to the tendency of the studies to observe fairness perceptions and (non)compliance behaviour as a cause and effect, rather than as a method of rationalisation of their behaviour. In this instance, these researchers (Jackson & Milliron, 1986; Lempert, 1992) argued that the taxpayers' acts of not complying are not due only to their negative perceptions on the income tax system. Rather, these negative perceptions of the income tax system are used as an excuse to justify their non-compliance behaviour.

In the case of the New Zealand and Malaysian environments, there is little evidence to consider regarding such a relationship due to the minimal level

of research currently available. To the researcher's knowledge, there is only one study conducted in each of New Zealand and Malaysia that examines the effect of fairness perceptions on (non)compliance behaviour (Hasseldine et al., 1994; Mustafa, 1996), and both were conducted some time ago. Thus, it is worth investigating whether fairness perceptions affect compliance behaviour in New Zealand and Malaysia. The mixed findings documented overseas suggest that this relationship can be hypothesised as follows:

Research Question 6: Do fairness perceptions influence taxpayers' compliance behaviour in New Zealand and Malaysia?

Hypothesis 6: Fairness perceptions of the income tax system by New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviour.

3.3.2.2 Attitude towards Compliance and Compliance Behaviour

Attitude towards compliance simply refers to a person's evaluation of whether they will comply or not with their tax obligations. This evaluation is made based on the outcomes of whether performing such a behaviour would be advantageous and improve one's emotions with respect to taxation. The evaluation of the advantages or disadvantages of (non)complying with their tax obligations is described as 'instrumental attitude', while the evaluation on feelings of happiness and guilt in

(non)complying is labelled 'affective attitude'. These two separate components of attitude are empirically regarded as important in measuring a person's attitude. Having said that, this study considers attitude towards compliance as both affective attitude and instrumental attitude, in an effort to further investigate the influence of attitude towards compliance on compliance behaviour.

Previous overseas studies (for example, Cullis & Lewis, 1997; Hanno & Violette, 1996; Kasipillai & Jabbar, 2003; Loo et al., 2008; 2009; Trivedi et al., 2005) on the association between attitude towards compliance and compliance behaviour, either through survey or experimental design, have established a positive link between the two variables.[49] This is consistent with the premise under the TPB that favourable attitude towards behaviour will be more likely to affect behaviour in a positive way. In New Zealand and Malaysia, however, little has been done to investigate this relationship. While Loo et al. (2008; 2009) have investigated such a relationship in Malaysia via a mixed method approach, inconsistent findings were documented, thus requiring more studies to be conducted in the country. This study, therefore, proposes that:

[49]Previous studies (for example, Bobek, 1997; Hanno & Violette, 1996; Trivedi et al., 2005), however, tended to measure attitude towards compliance as an overall evaluation, rather than as two separable components as intended in this study.

Research Question 7: Does attitude towards compliance influence taxpayers' compliance behaviour in New Zealand and Malaysia?

Hypothesis 7a: Affective attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour.

Hypothesis 7b: Instrumental attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour.

3.3.2.3 Subjective Norms and Compliance Behaviour

Subjective norms are described as an individual's perception of the expectations of the referent groups, whether he or she should, or should not, comply with their tax obligations. Referent groups refer to individuals of whom taxpayers normally compare or refer to, which may include family members, friends and colleagues. Previous studies claim that subjective norms contribute to different compliance behaviours across countries. This is because subjective norms are normally associated with a taxpayer's identity, culture and societal norms. Also, studies have introduced various definitions of subjective norms. For instance, some studies consider subjective norms to include injunctive and descriptive norms, while others claim that subjective norms are independent of those two types of norms, although they are all categories of social norms. In

this study the first view was adopted where subjective norms are measured using both injunctive and descriptive components.

In terms of the effect of subjective norms on compliance behaviour, mixed findings have been documented. Some studies (for example, Bobek, 1997; Bobek et al., 2007; Elffers et al., 1987; Hanno & Violette, 1996) have found a positive relationship between the two variables while others (Kirchler et al., 2006) have failed to establish a significant relationship. In New Zealand and Malaysia, to the researcher's knowledge, no prior evidence is available. To investigate such a relationship, this study proposes:

Research Question 8: Do subjective norms influence taxpayers' compliance behaviour in New Zealand and Malaysia?

Hypothesis 8: Subjective norms of New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviour.

3.3.2.4 Perceived Behavioural Control and Compliance Behaviour

Perceived behavioural control reflects an individual's perception of the ease or difficulty in performing a particular behaviour. Ajzen (1991) stipulates that a behaviour that is easy to perform is high in perceived behavioural control, while one that is difficult to perform is low in perceived behavioural control. Furthermore, Ajzen (1991) suggests that an

individual with high perceived behavioural control will be more likely to perform the behaviour in context than an individual with lower perceived behavioural control.

In tax compliance behavioural research, when a taxpayer believes that he or she can successfully complete and file the tax return forms with Inland Revenue without any mistakes, the person appears to have a high perceived behavioural control and is more likely to comply with their tax obligations. Likewise, if a taxpayer believes that he or she can avoid or evade paying tax without being caught by a tax audit, the person also appears to have a high perceived behavioural control over non-complying, and thus, is more likely to avoid or evade paying tax.

In this study, the researcher is interested in respondents' perceived behavioural control over non-complying with tax obligations. In particular, it is anticipated that the higher the perceived behavioural control, the more likely that taxpayers will avoid being compliant. It is therefore proposed:

Research Question 9: Does perceived behavioural control influence taxpayers' noncompliance behaviour in New Zealand and Malaysia?

Hypothesis 9: Perceived behavioural control of New Zealand and Malaysian taxpayers significantly influences their tax noncompliance behaviour.

3.3.2.5 Tax Knowledge and Fairness Perceptions

A review of the literature on the effect of tax knowledge on fairness perceptions provides strong support to the argument that possessing adequate knowledge of the income tax system will improve taxpayers' fairness perceptions. In line with this argument, some researchers have enhanced their studies by investigating the possible ways to improve taxpayers' knowledge and consequently fairness perceptions. They (Wartick, 1994; White et al., 1990) found that a formal class in taxation and exposure to information, especially during tax law changes, will be helpful to improve taxpayers' knowledge and fairness perceptions.

Contradictory evidence, however, is documented in Malaysia where an increase in taxpayers' knowledge has impacted negatively on fairness perceptions (Loo et al., 2008). In particular, their findings suggest that taxpayers who have adequate knowledge of government expenditure for public benefits view the income tax system to be unfair as they are not receiving sufficient benefits in return for their tax paid. In New Zealand, on the other hand, no evidence of the impact of tax knowledge on fairness perceptions is documented to date.

Considering the fact that inconsistent findings are reported in Malaysia and New Zealand, compared to previous studies overseas, may be attributable to the different measures used, this study covers three aspects of tax

knowledge, namely general knowledge, technical knowledge and knowledge of legal sanctions. General knowledge relates to a broad idea of the income tax system such as its purpose and the tax structure. Legal knowledge emphasises taxpayers' knowledge on the regulation aspects of the income tax system, such as responsibility to submit their tax return forms timely and the penalty for non-compliance. Technical knowledge concerns with taxpayers' ability to fill and file their tax return forms themselves. These dimensions of tax knowledge are evaluated to form the overall knowledge of taxpayers on the income tax system, where the impact on fairness perceptions is consequently investigated as follows:

Research Question 10: Does knowledge of the income tax system influence taxpayers' fairness perceptions in New Zealand and Malaysia?

Hypothesis 10: Knowledge of the income tax system significantly influences taxpayers' fairness perceptions in New Zealand and Malaysia.

3.3.2.6 Tax Complexity and Fairness Perceptions

Although the issue of complexity of an income tax system has been widely discussed in the tax compliance literature (see for example, Long & Swingen, 1987; McKerchar, 2003; 2005; Mustafa, 1996; Pau et al., 2007; Sawyer, 1996b; Saw & Sawyer, 2010; White, 1990), there are a few

studies (Carnes & Cuccia, 1996; Carroll, 1987; Cialdini, 1989; Kirchler et al., 2006; Milliron, 1985) investigating the relationship between tax complexity and fairness perceptions. These studies, which document an inverse relationship between tax complexity and fairness perceptions, were conducted mainly in the United States and none of them was carried out in either New Zealand or Malaysia. In the absence of such empirical evidence, the proposition that tax complexity influences fairness perceptions will be tested. To do so, this study separates tax complexity into compliance complexity and content complexity. Compliance complexity is concerned with the process of keeping records, filling and filing tax return forms and making tax payments. Content complexity, on the other hand, relates to the complexity of the documents and relevant tax law. These dimensions of tax complexity are then integrated to investigate the proposition as follows:

Research Question 11: Does complexity of the income tax system influence taxpayers' fairness perceptions in New Zealand and Malaysia?

Hypothesis 11: Complexity of the income tax system significantly influences taxpayers' fairness perceptions in New Zealand and Malaysia.

3.3.2.7 Tax Knowledge and Perceived Behavioural Control

As indicated earlier, perceived behavioural control of an individual is associated with the extent of resources and skills that he or she possesses. Theoretically, a person with more knowledge of tax would be considered as having high perceived behavioural control than those with little knowledge. In this respect, possessing good tax knowledge would enhance the resources and skills of taxpayers to deal with their tax obligations (and whether or not to comply with them). In order to explore the potential relationships, it is proposed that:

> Research Question 12: Does knowledge of the income tax system influence taxpayers' perceived behavioural control in New Zealand and Malaysia?
>
> *Hypothesis 12: Knowledge of the income tax system significantly influences taxpayers' perceived behavioural control in New Zealand and Malaysia.*

3.3.2.8 Tax Complexity and Perceived Behavioural Control

In addition to the association with taxpayers' resources and skills, perceived behavioural control also depends on the degree of obstacles in performing certain behaviours. Theoretically, a simple task can be easily completed or performed compared to a complex one. In the case of tax compliance, previous studies (for example, Hasseldine & Bebbington,

1991; Long & Swingen, 1987; McKerchar, 2001; 2003; Mustafa, 1996; Strader & Fogliasso, 1989) have found that taxpayers generally consider meeting their tax obligations as not an easy task. They regard complexity of the income tax system as one obstacle that taxpayers normally encounter in dealing with their tax matters. In other words, these studies are suggesting that complexity of the tax system inversely affects their perceived behavioural control over (non)complying with the tax law. However, to the researcher's knowledge, such a relationship has yet to be investigated. Thus, this study will test the proposition that:

Research Question 13: Does complexity of the income tax system influence taxpayers' perceived behavioural control in New Zealand and Malaysia?

Hypothesis 13: Complexity of the income tax system significantly influences taxpayers' perceived behavioural control in New Zealand and Malaysia.

3.3.2.9 Fairness Perceptions and Attitude towards Compliance

The effect of fairness perceptions on attitude toward compliance has been documented in previous studies (Devos, 2009; Feld & Frey, 2007; Roberts, 1994; Taylor, 2001). These studies all found that fairness perceptions are influential determinants of taxpayers' attitudes towards compliance. Specifically, Taylor (2001) suggests that unfavourable perceptions of the

income tax system lead to taxpayers' negative attitudes towards compliance. While attitude normally comprises two components, namely affective attitude and instrumental attitude, these studies, however, investigate the effect of fairness perceptions on overall attitudes. Thus, the present study attempts to explore the relationship between fairness perceptions and the two components of attitudes (independently), as follows:

Research Question 14: Do fairness perceptions on the income tax system influence taxpayers' attitudes towards compliance in New Zealand and Malaysia?

Hypothesis 14a: Fairness perceptions on the income tax system significantly influence taxpayers' affective attitude towards compliance in New Zealand and Malaysia.

Hypothesis 14b: Fairness perceptions on the income tax system significantly influence taxpayers' instrumental attitude towards compliance in New Zealand and Malaysia.

3.4 Summary

This chapter set out the conceptual framework of the study to investigate the role of fairness perceptions and other relevant factors in taxpayers' compliance decision-making. This conceptual model contributes to the behavioural tax compliance literature in the following ways, as it:

(1) Focuses on the role of fairness perceptions in tax compliance;

(2) Considers various dimensions of fairness to form the overall fairness perceptions;

(3) Integrates Equity Theory and the TPB to explain compliance behaviour;

(4) Identifies tax knowledge and tax complexity as possible factors influencing fairness perceptions and perceived behavioural control; and

(5) Measures attitude in two separable components.

In relation to this conceptual framework, 14 hypotheses (plus 3 sub-hypotheses), are developed to be tested in this study. The following table presents a summary of the research hypotheses to be tested:

Table 3.1 Summary of Research Questions and Research Hypotheses

Research Question	Research Hypotheses
1. Do taxpayers in both New Zealand and Malaysia have the same levels of fairness perceptions of their current income tax systems?	**Hypothesis 1:** There is no significant difference in fairness perceptions between New Zealand and Malaysian taxpayers of their current income tax systems.
2. Do taxpayers in both New Zealand and Malaysia have the same levels of tax knowledge of their current income tax systems?	**Hypothesis 2:** There is no significant difference in the levels of knowledge between New Zealand and Malaysian taxpayers of their current income tax systems.
3. Do taxpayers in both New Zealand and Malaysia have the same levels of perceptions of the complexity of their current income tax systems?	**Hypothesis 3:** There is no significant difference in the levels of perceptions of the complexity between New Zealand and Malaysian taxpayers of their current income tax systems.

4. Do taxpayers in both New Zealand and Malaysia have the same levels of perceptions in relation to the TPB elements?	**Hypothesis 4a:** There is no significant difference in the levels of intention to comply, affective attitude, instrumental attitude, subjective norms and perceived behavioural control, between New Zealand and Malaysian taxpayers, in the "overstating business expenses" scenario. **Hypothesis 4b:** There is no significant difference in the levels of intention to comply, affective attitude, instrumental attitude, subjective norms and perceived behavioural control, between New Zealand and Malaysian taxpayers, in the "understating other incomes" scenario.
5. Do New Zealand and Malaysian taxpayers perceive the fairness of their income tax systems as being multi-dimensional?	**Hypothesis 5:** New Zealand and Malaysian taxpayers perceive fairness of their income tax systems as being multi-dimensional.
6. Do fairness perceptions influence taxpayers' compliance behaviour in New Zealand and Malaysia?	**Hypothesis 6:** Fairness perceptions of the income tax system by New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviour.
7. Does attitude towards compliance influence taxpayers' compliance behaviour in New Zealand and Malaysia?	**Hypothesis 7a:** Affective attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour. **Hypothesis 7b:** Instrumental attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour.
8. Do subjective norms influence taxpayers' compliance behaviour in New Zealand and Malaysia?	**Hypothesis 8:** Subjective norms of New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviour.
9. Does perceived behavioural control influence taxpayers' noncompliance behaviour in New Zealand and Malaysia?	**Hypothesis 9:** Perceived behavioural control of New Zealand and Malaysian taxpayers significantly influences their tax noncompliance behaviour.
10. Does knowledge of the income tax system influence taxpayers' fairness perceptions in New Zealand and Malaysia?	**Hypothesis 10:** Knowledge of the income tax system significantly influences taxpayers' fairness perceptions in New Zealand and Malaysia.
11. Does complexity of the income tax system influence taxpayers' fairness perceptions in New Zealand and Malaysia?	**Hypothesis 11:** Complexity of the income tax system significantly influences taxpayers' fairness perceptions in New Zealand and Malaysia.

12. Does knowledge of the income tax system influence taxpayers' perceived behavioural control in New Zealand and Malaysia?	**Hypothesis 12:** Knowledge of the income tax system significantly influences taxpayers' perceived behavioural control in New Zealand and Malaysia.
13. Does complexity of the income tax system influence taxpayers' perceived behavioural control in New Zealand and Malaysia?	**Hypothesis 13:** Complexity of the income tax system significantly influences taxpayers' perceived behavioural control in New Zealand and Malaysia.
14. Do fairness perceptions on the income tax system influence taxpayers' attitude towards compliance in New Zealand and Malaysia?	**Hypothesis 14a:** Fairness perceptions on the income tax system significantly influence taxpayers' affective attitude towards compliance in New Zealand and Malaysia. **Hypothesis 14b:** Fairness perceptions on the income tax system significantly influence taxpayers' instrumental attitude towards compliance in New Zealand and Malaysia.

The following chapter will discuss the methods and analysis to be conducted in order to answer these research questions and hypotheses.

Chapter 4

Research Methodology

4.1 Introduction

The inquiry paradigm used in research is generally influenced by a researcher's ontological and epistemological beliefs. These beliefs represent how the researcher views and seeks to understand the world. The two extremely contradicting paradigms are positivism and constructivism. The positivism approach views the world as objective realism and therefore suggests that knowledge is created by deductive reasoning whereby a precise and systematic process is adopted (McKerchar, 2010). Thus, positivist researchers normally adopt quantitative methods such as surveys and experiments in designing their research. The constructivism approach, on the other hand, views the world based on researcher's interpretation, which may be influenced by his or her own views, beliefs, experiences and existing knowledge (McKerchar, 2010). In this respect, constructivist researchers assume that knowledge is created by inductive reasoning and typically adopt qualitative methods in their research, such as interviews.

There are other inquiry paradigms that lie between positivism and constructivism, known as critical realism and pragmatism. These two paradigms generally combine both orientations of positivism and

constructivism. Researchers adopting these paradigms view the world as complex and therefore cannot be simply understood through empirical realism (McKerchar, 2003). Thus, a mixed methodology is normally adopted in their research.

A gradual development of studies incorporating both quantitative and qualitative orientations indicate not only moves toward an end of paradigm wars (between positivist and constructivist) with respect to taxation, but also the compatibility of the two approaches. This development is clearly expressed by Brewer and Hunter (1989) (pp. 16-17) in the following quote:

> *"Social science methods should not be treated as mutually exclusive alternatives among which we must choose….our individual methods may be flawed, but fortunately the flaws are not identical. A diversity of imperfections allow us to combine methods….to compensate for their particular faults and imperfections".*

In her article, McKerchar (2008) also expresses a similar view regarding the blend of approaches in conducting research, particularly in taxation. McKerchar (2008, p. 20) argues that "*each strategy has its strength and weaknesses and the drive for mixed method research….is to use one strategy to either inform, validate or compensate for the weaknessess of*

another". In other words, McKerchar (2008) suggests that a combination of both quantitative and qualitative methods is a more pragmatic approach to gain a better understanding of the phenomenon under study.[50]

While acknowledging an important contribution of a mixed method approach in taxation studies, McKerchar (2010) also highlights several reasons behind the use of such an approach. The first is the need to address different objectives of the study which cannot be achieved by a single method. The second reason is to enable one approach to inform another approach, either in design or interpretation, as illustrated in McKerchar (2003). In her study, McKerchar (2003) adopted a large-scale survey followed by a case study. The third reason is to triangulate the findings of different approaches (either performed concurrently or sequentially) in an effort to provide greater confidence to the study. Based on her recommendations, it appears that the main reason for the researcher to adopt a mixed method approach is to enable one approach to inform another approach in the interpretation of the overall results. To be consistent with this strategy, a similar sampling frame is used to draw the potential respondents for both approaches.

[50] Examples of the taxation studies that adopted mixed method approach are Loo (2006) and McKerchar (2003).

Having said that, a sequential mixed method approach, combining survey questionnaires and in-depth interviews, is utilised to answer the research objectives as set out in Chapter 3. The current chapter begins with the discussion of the process involved in the survey method in a step-by-step manner. This is followed by an overview of the procedures undertaken for the interview approach.

4.2 Survey

This section describes the detailed process of conducting surveys, beginning with considerations to use a postal mail or electronic survey form, followed by the questionnaire design and sample selection. Then discussion on ethical considerations, pilot testing, and data collection procedures are presented. Finally, the measurement and analysis of the data gathered through the survey questionnaires is considered.

4.2.1 Postal vs. Electronic Survey

Hair et al. (2007) suggest two available approaches to ensure questionnaires reach the targeted respondents, a traditional approach (through the post or fax[51]) and electronic delivery. Each approach has its own advantages and disadvantages. Mail surveys, for instance, have the capacity to reach a large number of geographically dispersed respondents

[51] The fax survey approach seems inappropriate as only a few individuals have fax machines in their home. If the targeted respondents are businesses, the use of a fax survey will not be such a problem.

at relatively low cost, but they have the disadvantages of a low response rate (see for example, Harzing, 1997; Slemrod & Venkatesh, 2002) and difficulty in administering follow-ups. Notwithstanding these features, mail surveys are the only feasible data collection instrument for research in more than one nation (Harzing, 1997). With the advance of information technology, this view may no longer be accurate, as there are other alternatives to the traditional mail survey, such as an electronic survey administered through e-mail or web-hosted provider. While this approach would provide a global reach and faster data collection, it is limited to computer users with internet access.[52] After taking into consideration the strengths and limitations of each approach, this study utilises mail survey questionnaires, providing wider access and better coverage of the relevant populations.

4.2.2 Questionnaire Design

The questionnaires were initially prepared in English and then translated into the Malay language to cater for the respondents in Malaysia. There are four parts to the questionnaire. Part 1 is concerned with taxpayers' perceptions of tax fairness, while Part 2 consists of questions focusing on the determinants of tax fairness perceptions. In Part 3, hypothetical tax scenarios are developed to gauge perceptions of compliance behaviour.

[52] In future with increase in computers at home and penetration of internet, electronic surveys may be viable. Currently, electronic surveys may therefore be more suited for businesses.

Similar hypothetical tax scenarios were used to capture the elements of the Theory of Planned Behaviour (TPB). Finally, Part 4 is designed to obtain demographic background information such as age, gender, ethnicity, marital status, education level, occupation, income level, employment sector, number of dependents, and geographic area. All parts, with the exception of Part 4, use a Seven-Point Likert scale to measure the items. Additionally, scope for individual participant comments were provided through several open-ended questions.

4.2.3 Sample Selection

This section provides a description of the sample selection in both New Zealand and Malaysia. While the targeted group is individual taxpayers, there are differences in the sample group chosen between the two countries due to the different tax environments and also the availability of data. Notwithstanding this approach, these differences do not defeat the purpose of this study because the samples are still drawn from the relevant (sub)population of individual taxpayers in both countries. Furthermore, a study of perceptions is relevant to all the taxpaying public regardless of their sources of income.

4.2.3.1 New Zealand

In 2006, New Zealand had approximately 2.43 million individual taxpayers (Statistics New Zealand, 2006a) who paid a total direct income taxes of

NZ$24.6 billion (New Zealand Inland Revenue, 2006). The amount represents 64 percent of total direct taxes (New Zealand Inland Revenue, 2006). Based on these statistics, we can conclude that individual taxpayers are the major contributor to direct income taxes collected in New Zealand. Thus, it is appropriate to investigate their perceptions of fairness and compliance behaviour.

In order to obtain a sample of individual taxpayers, the researcher believes it is appropriate to use the latest (2008) Electoral Roll. The Electoral Roll is a list of all New Zealand voters over the age of 18 years and will include most New Zealand individual taxpayers. The use of the Electoral Roll in tax studies has been previously undertaken in New Zealand, including Hasseldine et al. (1994). The advantage of using the Electoral Roll is that it has potential to incorporate a more diverse group of individual taxpayers, including the salaried and wage earners, self-employed individuals and also tax beneficiaries.

It may be argued that the self-employed individuals are considered the most appropriate target group to capture compliance behaviour,[53] compared to other groups of individual taxpayers, based on the fact that they are required to file income tax return forms annually (since their

incomes are not normally fully taxed at source).[54] However, this assertion can be disputed for the reason that every taxpayer, whether salaried, self-employed or even beneficiaries, should potentially be given the opportunity to express their opinions on the fairness of the current income tax system. They are all taxpaying individuals, thus the fact whether they are obliged to file tax return forms or not is likely to be irrelevant. This is particularly justifiable when it is reported that the IRD has collected hundreds of millions of dollars in overpaid taxes from PAYE taxpayers (Stock, 2007).

4.2.3.2 Malaysia

Notwithstanding the availability of the 2008 Electoral Roll in Malaysia, it may not be appropriate source to draw the sample of individual taxpayers due to the following reasons. The first reason is the fact that Electoral Roll consists of all voters from various economic backgrounds, from those not in paid employment (e.g. full time housewife and the elderly) to salaried and self-employed persons. Since paying tax is practically relevant to

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[53] In this study, tax compliance is assumed to take place when the taxpayer files all required tax returns at the proper time and that returns accurately report tax liability in accordance with the tax law (Roth et al., 1989).

[54] In New Zealand, most salaried individuals are not obliged to file tax return forms as their incomes are taxed at source through the Pay As You Earn (PAYE) system and may be reviewed via a Personal Tax Summary (PTS). If the PTS shows insufficient tax paid, taxpayers will have to make an additional tax payment. In the case of an overpayment of tax, taxpayers will be entitled to tax refund and need to apply for it from Inland Revenue. However, individuals are required to file an IR3 tax return form when they earn income that has not had tax deducted, such as rental income or income from self-employment (New Zealand Inland Revenue, 2008b).

those with monthly incomes of at least MYR2,500 (NZ$1,190), there is the possibility for the researcher to systematically select a sample from the Electoral Roll who may not meet this criteria. Consequently, this would result either in a low response rate or out of frame responses. This scenario is different from New Zealand where all income earners are subject to tax regardless of the amount earned, thus suggesting the appropriate use of the Electroral Roll in New Zealand. The second reason is its bigger population of 11.08 million registered voters (from 222 electorates) (Election Commission Malaysia, 2010) in the Electoral Roll which may make it difficult for the researcher to manage. The third reason is that the addresses are sometimes not updated and therefore do not reflect the current residential addresses of the registered voters. Thus, there is a high possibility that the intended recipient will not receive the letter. Having considered the limitation of using the Electoral Roll in Malaysia, the researcher decided to focus on the salary and wage earners who are subject to tax.

The focus on salaried individuals is appropriate since they form the majority of taxpayers (54 percent) in the country (Inland Revenue Board of Malaysia, 2004). In addition, the statistics show that about 23 percent of salaried individuals failed to comply with their tax filing obligations

(Inland Revenue Board of Malaysia, 2005).[55] The sampling frame was carried out through public entities (inclusive of statutory bodies) and private entities engaging in the service industry, as summarised in Table 4.1. These sectors were selected to further test if there is any significant difference with respect to fairness perceptions and compliance behaviour among public servants and their counterparts in the private sector. Since government agencies only engage in service delivery, it is inappropriate to obtain other industries in the private sectors (such as manufacturing or trading) to compare results. Hence entities in the private sector engaging in service delivery were identified as the target.

This study applied cluster sampling based on geographical area. There are thirteen states and three Federal Territories in Malaysia. However, for the purposes of this study, only eleven states and one federal territory in Peninsular Malaysia were considered.[56] A list of twelve government agencies selected from eight ministries[57] was developed, based on the availability of departments in all of the states under this study, the number

[55] Even though salaried individuals are subject to monthly Schedular Tax Deduction (STD), they are still required to submit their tax return forms. If, at the end of the year, the sum of STD paid is lower than the tax liability, an additional amount of tax must be paid. In the opposite situation, a tax refund will be made by the Inland Revenue Board (IRB).

[56] A sample of taxpayers in Peninsular Malaysia is normally representative of the total population in Malaysia. Only a quarter of the total populations reside in Sabah, Sarawak and Labuan. Extending the sample selection to those states and a federal territory will incur more cost with respect to postage as they are physically separated from Peninsular Malaysia. Further, the main ethnicities in Malaysia are concentrated in Peninsular Malaysia.

[57] Malaysia has twenty five ministries. In this study, the agencies selected are representatives of eight ministries.

of staff in the departments and the possibility they will respond.[58] Six private entities were then selected to closely match the government agencies as far as possible.[59] These entities are also available in all states under this study.

Table 4.1
Sampling Frame

Ministry and Government Agencies	Private Agencies
1. Prime Minister's Department a. Department of Statistics b. Pilgrimage Fund Board	1. Banks
2. Ministry of Agriculture and Agro-Based Industry a. Department of Veterinary Services	2. Hotels
3. Ministry of Entrepreneur and Cooperative Development a. Council of Trust for the Indigenous People	3. Tenaga Nasional Berhad
4. Ministry of Finance a. Royal Customs Department of Malaysia b. Accountant General Department c. Employees Provident Fund	4. Telekom Malaysia Berhad
5. Ministry of Health a. General Hospitals	5. Private Hospitals
6. Ministry of Higher Education a. Public Higher Learning Institutions	6. Private Higher Learning Institutions
7. Ministry of Works a. Public Works Department	
8. Ministry of Home Affairs a. National Registration Department b. Immigration Department	

[58] For example, the Royal Police Department has branches all over Malaysia but their heavy workloads might hinder them from providing responses to the survey.

[59] Even though the number of entities selected is skewed to the public sector, an equivalent number of potential respondents were selected from both public and private sectors. The reason being is that the number of individuals who are subject to pay tax in each public sector is generally lower than in the private sector. In addition to this, banks, hotels, private hospitals and private higher learning institutions could involve more than one organisation in each state.

4.2.4 Sample Size

It is a common practice in research to use sample in order to make generalisations about populations. Ideally, samples are selected, usually by some random process, so that they represent the population of interest (Tabachnick & Fidell, 2001). The choice of sample size is normally made after considering statistical precision, practical issues and available resources (e.g. cost and time). While there are various ways of determining the appropriate sample size (e.g. Alreck & Settle, 1995; Roscoe, 1975; Weisberg & Bowen, 1977), a formula provided by Yamane (1967) is expressed as:

$$n = N/[1 + N(e)^2]$$

In this formula, 'n' represents the sample size to be calculated, while 'N' is the relevant population. The value of 'e' (standard error) depends on the required confidence level set by the researcher. If the confidence level is 95 percent, then the 'e' value would be 0.05.[60] Applying this formula in this study to obtain the sample size for New Zealand individual taxpayers of 2.43 million would result in a recommended sample size of 400. When the formula was applied to the population of salaried and wage earners in Malaysia of 2.59 million, the recommended sample size was also 400.

Another reference for determining the sample size is offered by Krejcie and Morgan (1970). The authors provide a table for reference of the appropriate sample size (n) based on the number of population (N) as reproduced below.

Table 4.2
Population and Sample Size

N	n	N	n	N	n	N	n	N	n
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	241	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Source: Krejcie and Morgan (1970, p608)

The authors further stated that as the population increases (over 100,000), the sample increases at a diminishing rate and the sample size eventually remain constant at slightly more than 380. While the previous studies suggest to use the appropriate sample size of 400, the researcher decided to consider a larger sample size (of 2,500 in each country) considering the

[60] A significance level of 0.05 has been established as a generally accepted level of confidence in most behavioural sciences (Hill, 1998).

possibility of the low response rates reported in mail surveys (Slemrod & Venkatesh, 2002; Tran-Nam & Karlinsky, 2008).

4.2.5 Ethical Considerations

Since this study involved human participation, approval from the University of Canterbury's Human Ethics Committee was sought prior to the distribution of the questionnaires. It was essential to obtain Human Ethics approval to confirm that the content of the questionnaires conforms to the relevant ethical standards and cultural values. This approval was mentioned in the covering letter sent to respondents. In addition to this, approval from Economic Planning Unit, Prime Minister's Department of Malaysia, was also obtained to enable data to be collected in Malaysia. This approval was clearly stated in the covering letter sent to Malaysian respondents to encourage them to respond. A copy of the approval letter from the University of Canterbury's Human Ethics Committee and from the Economic Planning Unit, Prime Minister's Department, are attached as Appendices 1 and 2, respectively.

4.2.6 Pilot Testing

Pilot testing, sometimes known as pre-testing, is viewed as an iterative process aimed at improving a survey instrument. In the process, the questionnaire may have to be restructured and some items may have to be rewritten to fit the research objectives. At this stage, the emphasis is

placed on the appropriate wording in questions, clarity of instructions, and the like rather than to report results (Synodinos, 2003). Based on this understanding, the survey questionnaire was pretested in three-stages. In stage one, experts in the field of taxation and research methodology in both New Zealand and Malaysia were asked to review and comment on the initial questionnaire. The questionnaire was then improved after incorporating their comments and suggestions. In stage two, the questionnaires were sent out to a small group of taxpayers, postgraduate students and high-school students for pilot testing in New Zealand.[61] The involvement of high school students were considered vital particularly with regard to their opinions on terms or language used in the questionnaire since they were proxies for the actual taxpayers who mainly were high-school leavers.[62] Based on the feedback from the pilot testing, the wording of a few items was changed.

Finally, in stage three, the survey instrument was translated from English language to the Malay language for the Malaysian sample. This translation process was performed with the assistance of both tax experts and language experts to ensure the wording and concepts used were equivalent to the

[61] Taxpayers include academic and non-academic staff at the University of Canterbury, factory workers and professionals. Postgraduate students involved those with accounting and non-accounting backgrounds.

[62] I would like to thank the members of the Department of Accountancy, Finance and Information Systems (now known as the Department of Accounting and Information Systems) for their suggestion to include high school students in the pilot test.

New Zealand questionnaire and meaningful.[63] In addition to this the reliability of the translated instrument was validated by pretesting the Malay version questionnaire among potential respondents (Synodinos, 2003). In doing so, the questionnaires were distributed to thirty salaried taxpayers in Malaysia for their feedback. Based on their recommendations, some of the items were rewritten. Copies of the final survey questionnaires in both the English language (New Zealand) and Malay language (Malaysia) are included as Appendices 3 and 4, respectively.

4.2.7 Data Collection Procedures

This section describes the procedures undertaken to gather data in New Zealand and Malaysia.

4.2.7.1 New Zealand

In New Zealand, the questionnaires were posted along with an accompanying letter and a postage-paid return envelope. The accompanying letter emphasised the research purpose, the guarantee of respondent anonymity, and the response deadline. A five-week return date was requested. Follow-up reminders (together with questionnaires) were subsequently sent with another four weeks for potential respondents to complete the questionnaires. To increase the response rate, strategies such

[63] Tax lecturers and the officers from the National Institute of Translation, Malaysia, were given both the English and Malay versions of the questionnaires. Their feedback was then compared by the

as attractive envelopes, well-written cover letters and reasonable length questionnaires, were adopted as suggested by Hair et al. (2007).

4.2.7.2 Malaysia

Unlike New Zealand, the distribution of questionnaires in Malaysia was made in person rather than by mail. This method was chosen not only to improve the response rate but also due to the lack of an appropriate source from which to obtain the contact details (that is, mailing addresses) of the targeted sample. The options to reach this targeted group are through the IRB database or via employers. The difficulty in obtaining access to the IRB database left the researcher with one option, that is to approach the employers and seek their assistance with distributing the questionnaires.

The questionnaires were distributed to the potential respondents with the help of Human Resource Personnel or the Head of Department in the respective organisations. Prior to that, the researcher personally met up with the organisations' representatives to describe the nature of the study and discuss the number of potential respondents required.[64] Similar to New Zealand, potential respondents were also provided with questionnaires and an accompanying letter emphasising the research purpose, the guarantee of

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researcher.

[64] The representatives were requested to distribute about six to fifteen questionnaires to the employees in their organisations depending on the number of employees available and who met the criterion of tax

respondent anonymity and the response deadline. Follow-up reminders (with questionnaires), however, were not sent to the potential respondents as the representatives were hesitant to do so due to their busy schedules. Alternatively, telephone call reminders were made to the representatives requesting them to remind the potential respondents to return the questionnaires.[65] In addition, potential respondents were given a University of Canterbury bookmark to encourage them to complete the questionnaires and subsequently increase the response rate (Dillman, 2007). The completed questionnaires were passed to the organisations' representatives who subsequently posted them to the researcher in a pre-paid return envelope.

Different modes of conducting surveys among two different populations have been recognised in Dillman (2007) as a possible approach to collecting data. However, Dillman (2007) cautions researchers about the unintended consequence of measurement differences, especially when using mixed-mode surveys consisting of one survey which involves face-to-face meetings between the researcher and the participants, while another survey is carried out through use of the postal system or the internet. In this study, such consequences may not be apparent as the researcher did not have direct contact with the sample population. In other words, the

filing experience. The approval from the Economic Planning Unit, Prime Minister's Office, was highlighted during the meeting to convince the representatives of the significance of the study.

surveys in both New Zealand and Malaysia are similar in the sense that there is no face-to-face meeting between researcher and the sample.

4.2.8 Measurement

This study incorporates Equity Theory into the well-established TPB to explain the influence of fairness perceptions on taxpayers' compliance behaviour. The proposed conceptual model also includes two additional constructs, that is, tax knowledge and tax complexity. To adequately measure these constructs, multiple items were developed using information from both theoretical and empirical literature in both taxation and studies on human behaviour. Before discussing the specific measurement of these constructs, this section explores the differences between formative and reflective measures, and discusses the second order factor, which becomes particularly important when constructs are defined at a more abstract level.

4.2.8.1 Formative versus Reflective Measures

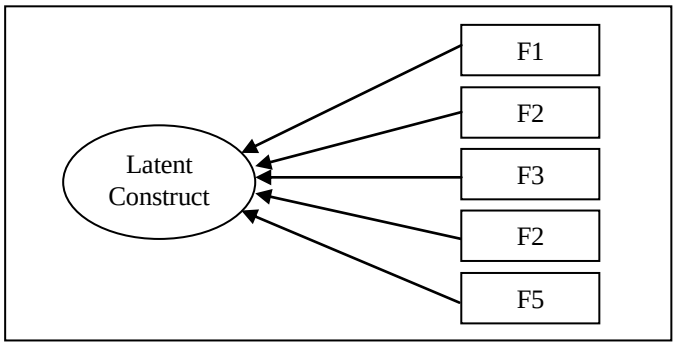
Formative measures are measures that form or cause the creation or change in the underlying construct (Blalock, 1964). This is illustrated in Figure 4.1 where the measures jointly influence the construct and the full meaning of the construct is actually derived from its measures. In other words, this suggests that the measures are not determined by the construct and thus the measures are not expected to correlate with each other. Hence internal

[65] As a token of appreciation, all representatives were given New Zealand key-chains for their support.

consistency reliability is not relevant to validate the formative measures. Another attribute of formative measures is that they capture the conceptual domain as a group. Specifically, this suggests that formative measures are not redundant as they tap different aspects of the conceptual domain. The implication of this is that dropping one formative indicator from a measurement model could be damaging as the model may omit a unique element of the conceptual domain (MacKenzie et al., 2005).

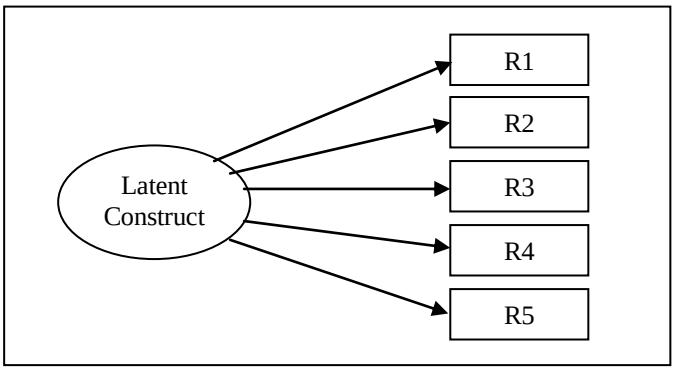
The opposite to formative measures are reflective measures which are commonly known as effect indicators. The measures are called ‘effect indicators’ because they are reflecting the underlying construct they represent (MacKenzie et al., 2005). Figure 4.2 illustrates the reflective measures where the direction of causality flows from the construct to the measures. Unlike formative measures, these reflective measures are expected to highly correlate due to the fact that they all reflect the same underlying construct. Hence they should demonstrate high levels of internal consistency reliability. In addition, reflective measures are assumed to be unidimensional where the measures are in fact individually tapping the entire conceptual domain. This attribute suggests that the consequences of dropping a reflective indicator is less damaging than the consequences of dropping a formative indicator because they do not alter the meaning of the construct.

Figure 4.1 Formative Measures



Source: Adapted from Bollen and Lennox (1991, p306)

Figure 4.2 Reflective Measures



Source: Adapted from Bollen and Lennox (1991, p306)

To help researchers distinguish between the formative and reflective measures, Jarvis et al. (2003) provide some guidelines which are reproduced in Table 4.3. The guidelines basically suggest that formative and reflective measures can be identified with reference to four criteria: (1) direction of causality between the constructs and its measures; (2) interchangeability of the measures; (3) covariation among the measures; and (4) similarity in antecedents and consequences.

Table 4.3 Decision Rules to Differentiate between Formative and Reflective Construct

		Formative	Reflective
1	Direction of causality from construct to measure implied by the conceptual definition	Direction of causality is from items to construct	Direction of causality from construct to items
2	Interchangeability of the indicators	Indicators need not be interchangeable	Indicators should be interchangeable
3	Covariation among the indicators	Not necessary for indicators to covary with each other	Indicators are expected to covary with each other
4	Are the indicators expected to have the same antecedents and consequences?	Indicators are not required to have the same antecedents and consequences	Indicators are required to have the same antecedents and consequences

Source: Jarvis et al. (2003, p203)

To illustrate the difference betweeen formative and reflective measures, Chin (1998a) provides the example of mental inebriation as a construct. In his example, the formative measures of mental inebriation would be the amount of beer, wine and hard liquor consumed, whereas the potential reflective measures might be blood alcohol level, driving ability, MRI brain scan and performance on mental calculations. For reflective measures, an improvement in the blood alcohol level measure would also imply an improvement in the MRI activity and other measures, since they are all meant to tap into the same concept. On the contrary, a change in the formative measures, for instance, an increase in beer consumption, does not indicate an increase in wine or hard liquor consumption (Chin, 1998a).

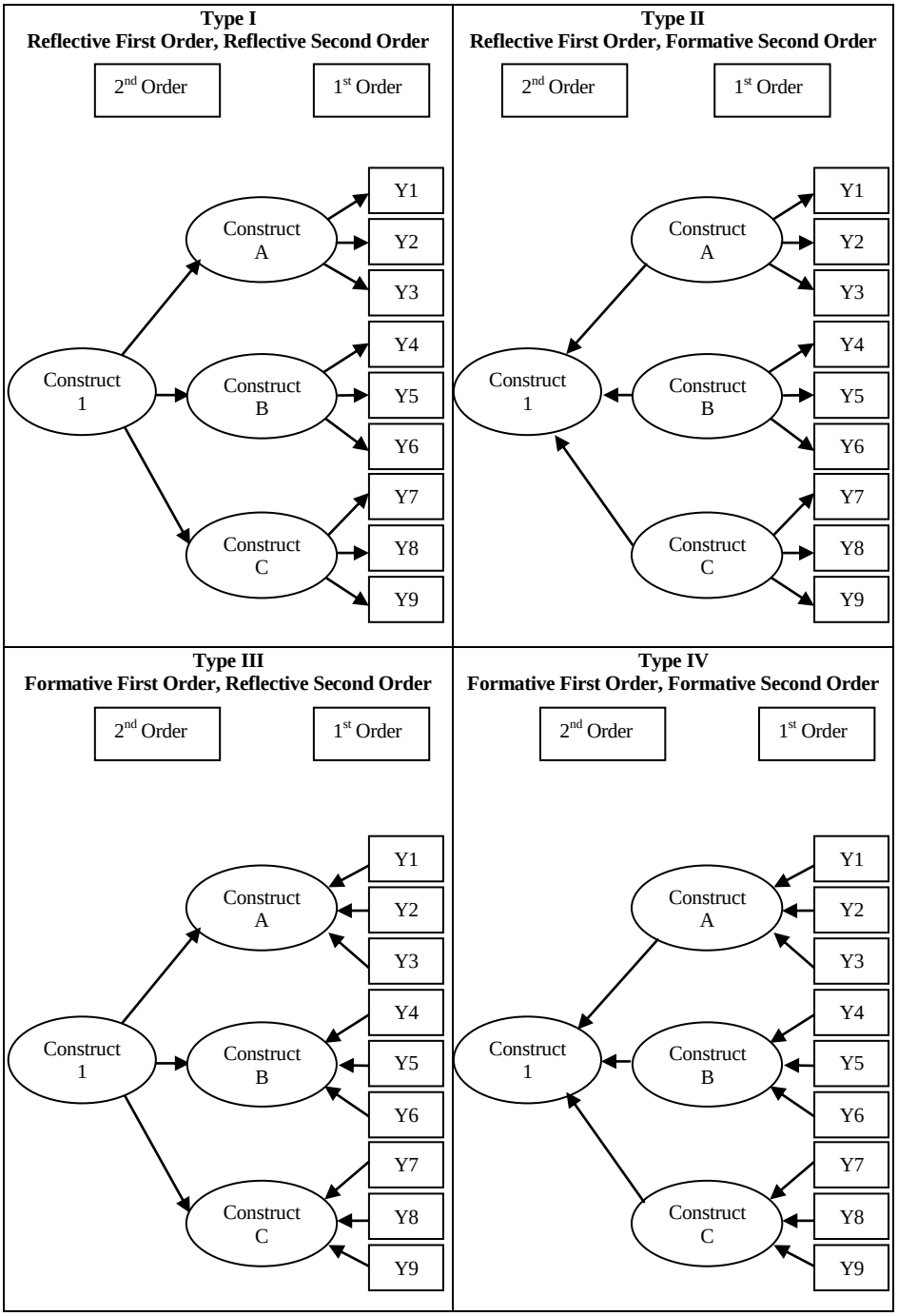
4.2.8.2 Second Order Factor

More often than not, conceptual definitions of constructs are specified at a more abstract level, requiring researchers to present the model at the second order factor (Jarvis et al., 2003). At this stage, higher order constructs are modelled as causally impacting a number of first order constructs, which are measured by multiple indicators (Chin, 1998a). In other words, the constructs in the second order factor are not directly connected to any measured indicators.

Based on the facts that a first order construct can be measured either with formative or reflective indicators, and those first order constructs can be either formative or reflective indicators of the second order factor, Jarvis et al. (2003) describes four possible options (as illustrated in Figure 4.3) in modelling the second order factor. In the Type I Model, it is assumed that both first order and second order constructs are measured in reflective forms. The Type II Model is one where the first order constructs have reflective indicators while they themselves are formative indicators of the underlying second order constructs. The Type III Model is the complete reversal of the Type II Model, where the first order constructs have formative indicators and they themselves are reflective indicators of the second order constructs. Another type of the second order factor is the Type IV Model, which has formative indicators for both first and and second order constructs. In addition Jarvis et al. (2003) also acknowledge

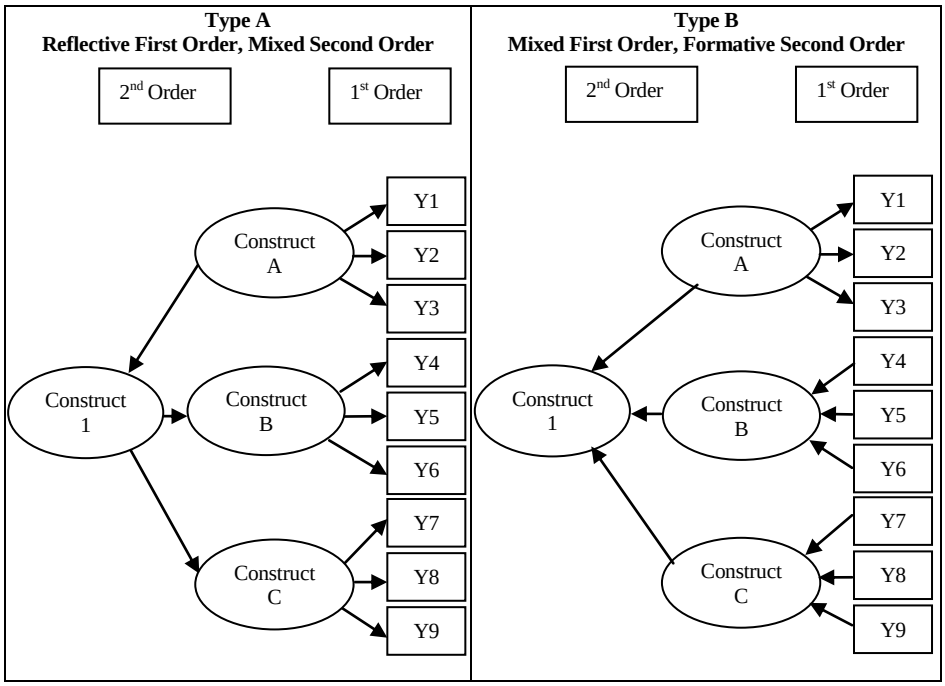
the mixed models contain a mixture of reflective and formative indicators at either the first order or the second order construct, as exhibited in Figure 4.4.

Figure 4.3 Four Options of Modelling the Second Order Factor



Source: Jarvis et al. (2003, p205)

Figure 4.4 Mixed Models

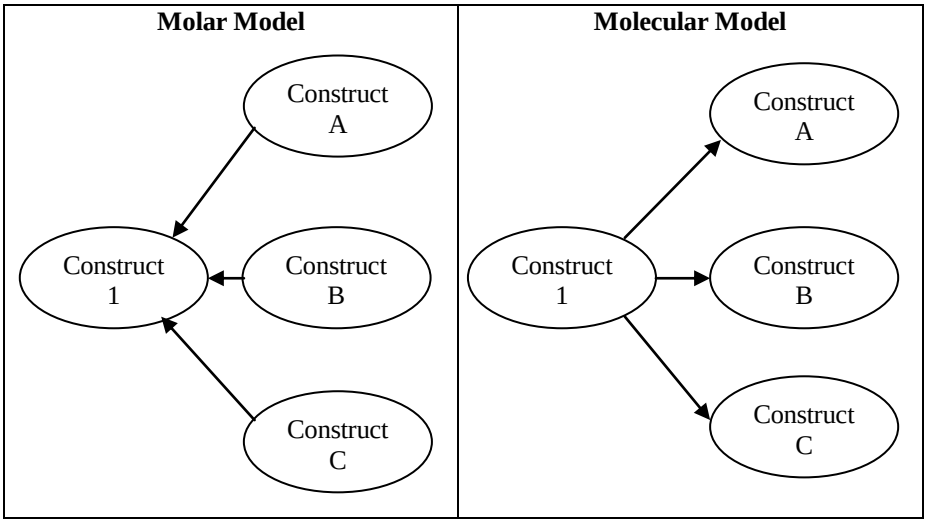


Schematic representation based on Jarvis et al. (2003, p204)

While Jarvis et al. (2003) consider the possible combinations of the models (both at first and second order), Chin and Gopal (1995) consider two possible approaches in modelling the second order factor; that is, molar and molecular. The choice to model either as molar or molecular depends whether the the first order constructs are treated as formative or reflective indicators of the underlying second order constructs. If the indicators are formative the model is said to be a molar model. On the other hand the molecular model is considered when indicators are reflective rather than formative (see Figure 4.5). One example of a molar model is presented by a mother's ability to interact with, and monitor, any given child, where it is measured by the number of children in a family, illness of the mother, and

hours of maternal employment (Cohen et al., 1990). On the other hand, a molecular model is observed through an example posited by Chin and Gopal (1995), where the overall perception of an individual's health is measured by perceptions of pain severity and persistence, energy level and activity limitation.

Figure 4.5 Molar and Molecular Models



Source: Adapted from Chin and Gopal (1995, pp. 49-50)

Based on the conceptual and theoretical framework, and the review of literature, the first order constructs in this study were developed to contain a mixture of both formative and reflective indicators. For example, out of seven dimensions (components) of fairness perceptions, three were measured with formative indicators while the remaining four dimensions were measured with reflective indicators. The second order constructs were all measured by formative components. For instance, fairness perceptions are set as the second order factor with underlying first order constructs of

general fairness, exchange fairness, horizontal fairness, vertical fairness, retributive fairness, personal fairness and administrative fairness. In view of the models set out by previous researchers (as described above), this study adopts the 'mixed first order with formative second order' model (Figure 4.4, Type B) or a molar model.

4.2.8.3 Model Constructs and Measures

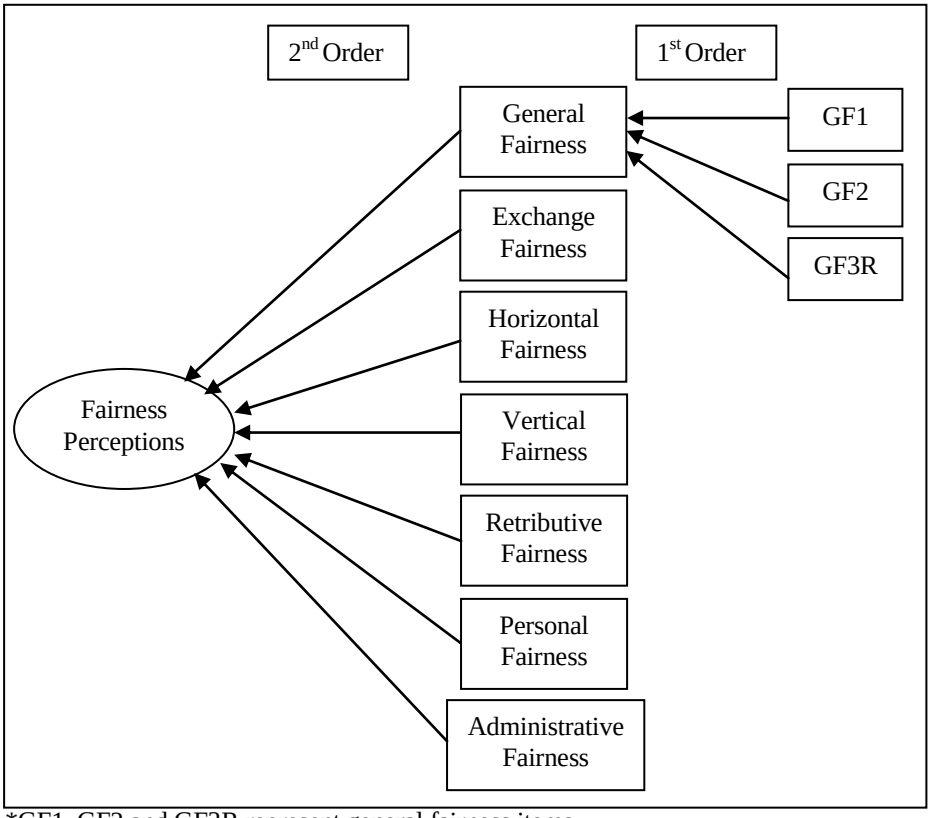
As discussed in Chapter 3, the proposed model of compliance behaviour has eight main constructs. These are fairness perceptions, tax knowledge, tax complexity, affective attitude, instrumental attitude, subjective norms, perceived behavioural control and intention to comply. These constructs are broad and complex, thus requiring a large number of items to adequately measure each of them. Appendix 5 sets out the name and code for the constructs, the component measures and the seventy item measures used in the questionnaire. The following section contains a discussion on the model constructs and the multiple indicators used to measure these constructs.

a. Fairness Perceptions

The construct fairness perceptions is operationalised as a second-order factor measured with seven first-order components. The components are general fairness, exchange fairness, horizontal fairness, vertical fairness, retributive fairness, personal fairness and administrative fairness. These

components are further measured with three items each, with the exception of administrative fairness with only two items. Figure 4.6 provides the example of the first and second order measures of fairness perceptions construct. This two-factor approach was adopted to develop the conceptual model at a higher level of abstraction (Chin, 1998a) and at the same time focusing on the sub-elements or the details of the main construct.

Figure 4.6 First and Second Order Measures of Fairness Perceptions Construct



*GF1, GF2 and GF3R represent general fairness items.

Overall twenty items were developed to capture the fairness perceptions construct. Out of these, fourteen were self-developed based on the income tax systems in Malaysia and New Zealand, while the remaining six items

were adapted from Gilligan and Richardson (2005). None of these items define the term 'fair' to the respondents, leaving them to use their own interpretation of fairness. Thus, some respondents will develop perceptions differently from their counterparts due to their different understanding of fairness. However, the main purpose of this study is to gauge taxpayers' *perceptions* of fairness. If a definition of fairness is provided, respondents will utilise the definition in answering the questionnaires, which would defeat the purpose of this study.

Since the fairness perceptions construct is multi-dimensional (see Bobek, 1997; Gerbing, 1988; Gilligan & Richardson, 2005) and these dimensions do not tap into the same aspect, this construct is treated as formative following the recommendation by Petter et al. (2007). In addition to this, Petter et al. (2007) suggest that it is possible for a multi-dimensional construct to have a formative relationship with subsconstructs, where the subsconstructs consist of the mix of formative and reflective items. Having said that, this study measured three dimensions as formative and the remaining four dimensions as reflective. The formative dimensions consist of general fairness, retributive fairness and administrative fairness where the items used to capture each of them do not highly correlate with each other. For example, in measuring administrative fairness, taxpayers were asked about opportunity to correct errors in their calculation of tax liability and Inland Revenue consistency in the administration of the income tax

system. These two items capture different aspects of administrative fairness of the income tax system. Similar logic applies to general fairness and retributive fairness, which are subsequently measured as formative indicators.

On the contrary, the remaining four dimensions, namely: exchange fairness, horizontal fairness, vertical fairness and personal fairness, were measured using unidimensional items that were expected to correlate with each other. For example, all three items used to capture horizontal fairness were related to the equivalent amount of tax for taxpayers with similar economic positions. In other words, these items are reflecting each other and thus measuring the same aspect of horizontal fairness. For this reason, the multiple item measures of exchange fairness, horizontal fairness, vertical fairness and personal fairness were regarded as reflective indicators.

b. Tax Knowledge

The tax knowledge construct is also operationalised as a second order factor and measured with three first-order components: general knowledge, legal knowledge and technical knowledge. As shown in Appendix 5, each component is again measured with two, three and four items, respectively, which makes up to a total of nine items. Similar to fairness perceptions, the tax knowledge construct is also considered multi-dimensional and thus

measured as being formative. At the item level, measures of legal knowledge are likely to covary and are thus measured as reflective. The other two dimensions, that is, general knowledge and technical knowledge, are regarded as measured with formative indicators.

c. Tax Complexity

Another construct that is operationalised as a second order factor is tax complexity, which was measured with two first order components, namely compliance complexity and content complexity. These components were in turn measured with four and three items, respectively. Since the component level measures of tax complexity are expected to not highly correlate with each other, the tax complexity construct is therefore considered to be formative. At the item level, the compliance complexity component is deemed to be measured with reflective indicators where all of its three items are expected to have high positive correlations. On the contrary, the content complexity component was considered formative since all measured items adequately encompass the different domains of the component.

d. The Theory of Planned Behaviour

The measures for the constructs of intention to comply, affective attitude, instrumental attitude, subjective norms and perceived behavioural control, as stipulated under the TPB, are captured with reference to the two

hypothetical scenarios developed in this study. The scenarios are concerned with overstating business expenses and understating other income. An example of the second scenario is given below:

> *Sally is a full-time teacher with taxable income of $50,000 a year. As a hobby, she likes to make handicraft items during her leisure time. Her friends learnt about the attractive souvenirs and asked Sally to make some items for them. In return, they paid Sally $500 in total. Since then, she has received a lot of orders from her colleagues and other neighbours. As a full-time teacher, she did not have enough time to meet the orders on her own and asked assistance from her two sisters. She paid each of them 10 percent of the amount received. During that year, she made a net total amount of $10,500 out of her activity. Although she should declare all her income, she could really use the money by not declaring the $10,500. She is confident that the Inland Revenue Department would not detect this amount if she omits it from her tax return form since there is no record of the cash received. What would you do if you faced a similar situation in the future?*

Following the two scenarios, a few statements relating to all elements of the TPB were provided where respondents were requested to express their

opinions on the statements, based on a seven-point Likert scale. In addition, all statements were designed as the 'direct' measures of the TPB where respondents were asked to indicate their overall attitude, subjective norms and perceived behavioural control in relation to the scenario in context. The use of 'direct' measures was empirically shown to be more appropriate than the 'indirect' measures (where respondents were asked to indicate their specific beliefs) if the study is about predicting intention (Ajzen, 2006; Francis et al., 2008). The use of multiple items to evaluate the TPB elements was also expected to produce a more valid and reliable index and consequently strong correlations among the variables (Manstead, 2004).

i. Intention to comply

The measurement of intention to comply as a dependent variable is described as the willingness to file the return form at the proper time and accurately report tax liability in accordance with tax law applicable at the time the return is filed (Roth et al., 1989).

To measure intention to comply, three items were developed which objectively are confined to the intention to comply with the scenarios under study. Thus the items are all expected to measure the same thing and therefore are likely to co-vary with each other. For example, in the above scenario, the measured items for intention to comply simply focus on

whether the respondents will declare or omit the cash received. Even though intention to comply can be measured by only a statement, a mix of a few related statements will reinforce taxpayers' intentions to comply. Based on that reasoning, the construct of intention to comply is deemed to be measured with reflective indicators.

ii. Affective attitude

Affective attitude, which relates to emotional drives (such as happy, sad, guilty) of performing certain behaviour, is measured with three items. These three items are reflective in nature as they solely focus on respondents' attitudes towards compliance behaviour prescribed in the hypothetical scenarios under study. For example, in the understating other income scenario, the items asked were concerned with respondents' affective attitude whether they feel pleased or guilty to not declare other income received in their tax return forms.

iii. Instrumental attitude

Unlike affective attitude, instrumental attitude is concerned with the cognitive consideration of whether performing a behaviour would be advantageous. In other words, instrumental attitude focuses on the benefits or drawbacks of complying (or not complying) with the tax obligations as described in the scenarios. To measure this construct, two reflective items for each scenario were developed and these are set out in Appendix 5.

iv. Subjective norms

The term subjective norms refer to a person's motivation to act in accordance to a referent's opinion when performing his or her own behaviour. For example, in this case of tax compliance, taxpayers might be motivated to comply (or not to comply) with tax obligations if their family or friends have complied (or not complied). To measure this construct, four items were developed for each scenario. These items are likely to co-vary with each other and therefore deemed to be reflective indicators (see Appendix 5).

v. Perceived behavioural control

Perceived behavioural control suggests that a taxpayer's inclination to perform certain behaviour depends on the degree of control that he or she has in performing that behaviour. The construct was measured with five reflective items for each scenario. As would be expected for reflective constructs, these items should have high positive inter-correlations (see Appendix 5).

e. Demographic Background Variables

The demographic details captured in this study include: age; gender; ethnicity; relationship status; education level; occupation; income level; source of income (employment sector in Malaysia); number of dependents; and geographic area.

Respondents' ages were measured in years. To obtain their age information, respondents were asked to indicate their age by choosing the age range that was applicable to them, namely: (a) under 20; (b) 20-29; (c) 30-39; (d) 40-49; (e) 50-59; and (f) 60 or over. Gender was assigned a dummy variable of 1 for male and 0 for female. To capture the ethnic group, respondents were asked to tick the appropriate group that they belong to. In New Zealand, the respondents could be identified as: (a) New Zealand European; (b) Maori; (c) Polynesian; (d) Indian; (e) Chinese; (f) Non-Chinese Asian; (g) Other. In Malaysia, ethnic groups were either: (a) Malay; (b) Chinese; (c) Indian; (d) Other.

For marital status, in New Zealand, the respondents were asked about their relationship status; either (a) married; (b) de facto; (c) civil union; (d) single; (e) other. Their status were transformed into dummy variables of 0 for married, 1 for de facto, 2 for civil union, 3 for single and 4 for other. In Malaysia, a dummy variable of 1 was assigned for married respondents, and 0 otherwise.

To measure respondents' education level, respondents were asked to specify their education level. In New Zealand, the level of education ranges from: (a) no formal education; (b) NZ School Certificate Year 11 or NCEA Level 1; (c) NZ Sixth Form Certificate Year 12 or NCEA Level 2; (d) NZ University Entrance Qualification Year 13 or NCEA Level 3; (e) Diploma

or Degree; (f) Honours Degree; and (g) Masters or PhD, following previous studies (Birch et al., 2003; Devos, 2006). In Malaysia, respondents were given three options, as either: (a) secondary level and below; (b) diploma or degree level; and (c) Masters or PhD. In both cases, the education level was transformed into dummy variables.

Another demographic background detail that was requested from the respondents was their occupation. The respondents were asked to specify their occupation, such as teacher, doctor, and so on.

Income level refers to the annual income earned by the respondents. In New Zealand, respondents were asked to tick the income range to which they belong, as either: (a) less than $20,000; (b) $20,001 - $30,000; (c) $30,001 - $40,000; (d) $40,001 - $50,000; (e) $50,001 - $60,000; (f) $60,001 - $70,000; (g) $70,001 or more. The income range is based on previous studies by Devos (2006) and Birch et al. (2003). In Malaysia, slight modification was made to the income range to suit the respondents' characteristics.[66] The income range to which the respondents were asked to indicate is: (a) MYR30,000 - MYR40,000; (b) MYR40,001 - MYR50,000; (c) MYR50,001 - MYR60,000; (d) MYR60,001 - MYR70,000; (e) MYR70,001 - MYR80,000; (f) MYR80,001 or more.

In New Zealand, the respondents were asked to specify their main source of income as either: (a) salary/wages; (b) interest/dividends; (c) rent; (d) royalties; (e) self-employed; (f) government benefits; (g) other. In Malaysia, instead of asking about their source of income, respondents were requested to state the employment sector (either government or private sector) they belong to. Because all respondents were from a salaried group, asking about their source of income would be of little value. In addition to this, both New Zealand and Malaysian respondents were also asked about their work experience. To capture this item respondents were requested to tick the appropriate box that matched their experience.

Another demographic background variable is the number of dependents. In New Zealand, the number of dependents includes: partner, children, parents and grandparents. In Malaysia, the number of dependents includes: 'legitimate' partner, and children of whom the respondents are financially responsible for. In both environments, respondents were asked to specify the number of dependents they have.

To capture geographic area, respondents were asked to tick the region that they live in. In New Zealand, geographical area were divided into five groups: (a) Auckland, Wellington and Canterbury; (b) Waikato, Bay of

[66] As indicated earlier, the sample which are relevant to this study are those with the monthly income of at least MYR2,500. Thus, setting the annual minimum income range of below MYR30,000 would be

Plenty, Hawke's Bay and Otago; (c) Northland, Gisborne, Taranaki, Manawatu-Wanganui, Nelson and Southland; (d) West Coast, Tasman and Marlborough; and (e) other. In Malaysia, all 11 states and a federal territory in West Malaysia were classified into four main groups: (a) northern region; (b) central region; (c) southern region; and (d) eastern region.

In addition to the above details forming the respondents' demographic backgrounds, three questions relating to their tax filing history were asked. The respondents were asked about the number of times they have filed tax return forms, the most recent year that they filed tax return forms, and their experience dealing with the revenue authority. Finally, the questionnaire contained four open-ended questions, giving respondents the opportunity to express their opinions relating to: fairness of the income tax system; tax knowledge; tax complexity; as well as their perceptions of compliance behaviour.

4.2.9 Data Analysis

This section sets out the proposed analysis to evaluate the survey data beginning with the non-response bias test and response representativeness. Next is a brief discussion of the descriptive analysis and the *t*-test analysis. This is followed by an introduction to the structural equation modelling

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of little value to the respondents.

(SEM) and Partial Least Squares (PLS) analysis, together with their measures to evaluate the models.

4.2.9.1 Non-Response Bias

A non-response bias test was performed to ensure that there is no bias on the samples. Benke and Street (1992) highlight that the popular approach to prove non-response bias is by comparing early responses to later responses or first responses to responses generated after follow-ups. If there are no significant differences between the two groups of responses, it can be assumed that there is no problem of non-response bias.[67]

4.2.9.2 Response Representativeness

One method of proving response representativeness is by comparing the demographic background of the responses with the entire population (McInnis, 2006). In this study, the responses in New Zealand and Malaysia were considered representative of an entire population if they reflected a similar distribution in terms of three criteria: gender, annual median income, and source of income for New Zealand or work sector for Malaysia.

4.2.9.3 Descriptive Analysis

Descriptive analysis provides preliminary ideas on how taxpayers in both New Zealand and Malaysia perceive their income tax systems, in relation to: tax fairness; tax knowledge; tax complexity; and tax compliance behaviour. In this analysis, basic features of the survey data are presented where the mean, standard deviation, variance, and minimum and maximum value for each item and construct are calculated. In addition, the frequency distribution is also determined. All these measures are obtained from the descriptive statistics available in the SPSS software.

4.2.9.4 *t*-test Analysis

Subsequent to the descriptive analysis, *t*-test analysis is carried out to check whether there is any significant difference in perceptions between the New Zealand and Malaysian taxpayers. For this purpose, an independent samples *t*-test is performed using the SPSS program Version 18, where the *p*-values are generated. With reference to the *p*-values obtained, the degree of differences (whether significant or not) are determined, and subsequently a conclusion can be drawn whether to accept or reject the hypotheses in the study.

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[67] It is important to note that this test only provides an indication of a non-response bias (and not completely reliable) as there are other ways of proving non-response bias such as by comparing survey

4.2.9.5 Introduction to Structural Equation Modelling and Partial Least Squares Methods

a. Structural Equation Modelling

SEM has now become very popular among social scientists due to its ability to perform path analytic modelling with latent variables (Chin & Newsted, 1999). Hair et al. (2006) claim that this relatively new statistical tool, which combines the multivariate tools such as multiple regression, path analysis, factor analysis and principal component analysis, actually originated in the first half of the twentieth century but only became widely used in the 1990s. Apparently one reason why the use of SEM is preferred among researchers is its greater flexibility to interact between theory and data (Chin & Marcolin, 1995; Chin & Newsted, 1999). In addition to this, greater use of SEM may be attributable to the four key characteristics of SEM itself, that is:

(1) the estimation of multiple and interrelated dependence relationships;

(2) an ability to represent unobserved concepts and correct for measurement error in the estimation process;

(3) a focus on explaining the covariance among the measured items; and

(4) a theory-based approach, where strong theory is needed to specify relationships in the models, that is, confirmatory analysis (Hair et al., 2006).

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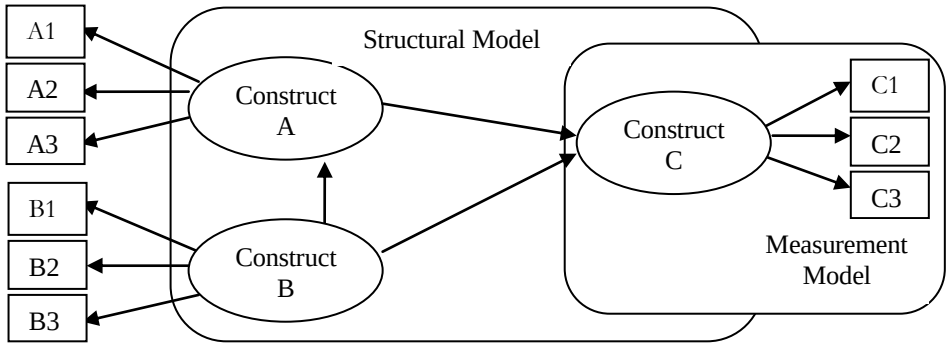
results to known population parameters and double-sampling (Groves & Couper, 1998).

SEM consists of two components: a measurement model linking a set of observed indicators to a smaller set of latent constructs; and a structural model linking the hypothesised model's latent constructs (Hair et al., 2006). Latent constructs are described as unobserved variables which are to be measured indirectly by two or more observed indicators. In the measurement model, the validity and reliability of these observed indicators in measuring the latent constructs are addressed. Once the validity and reliability of the measures in the measurement model are established, the relationship between the latent constructs can be assessed by path analysis to test the research hypotheses. The distinction between the measurement model and structural model can be depicted in Figure 4.7.

Figure 4.7 Measurement Model and Structural Model in SEM



Source: Adapted from Vatanasakdakul (2007, p115)

Notwithstanding the benefits of SEM,[68] there are also constraints in the approach, particularly with the covariance-based SEM (demonstrated by its software such as LISREL, EQS, AMOS, SEPATH and RAMONA) that

[68] There are two types of SEM, namely covariance-based and component-based.

need to be considered (Chin, 1998a). The first constraint is the parametric assumptions where the observed variables are expected to be normally distributed and that observations are independent of one another (Chin & Newsted, 1999).

Secondly, there is a sample size requirement. An inadequate sample size may result not only in poor parameter estimates and model test statistics (Chou & Bentler, 1995; Hu & Bentler, 1995), but also in the tendency to over-reject models, especially when the latent variables are dependent (Hu & Bentler, 1995).[69]

The third constraint is due to the model's complexity where Mulaik et al. (1989) suggest that various model fit indices tend to be favourably biased towards simpler models. From a practical point of view, a complex model with a number of indicators approaching 50 or even 100 may slow down the software packages program (Chin & Newsted, 1999).[70]

The fourth problem is the identification problem. In a covariance-based SEM, the measured items of a latent variable should always be reflective in nature. An attempt to include the formative measures will be problematic because the covariance-based SEM attempts to account for all the

[69] Hu and Bentler (1995) regard 250 or less as a small sample size.

[70] This constraint might be of less concern now with a faster technology available.

covariances among its measures. Likewise, if the researcher attempts to include measures that are in fact formative in the SEM and treat the measure as reflective, the resulting estimates will be invalid (Chin, 1998a), which in turn results in a misleading research conclusion (Cohen et al., 1990). Similarly, MacCallum and Browne (1993) clearly demonstrate that attempts to explicitly model formative indicators in an SEM analysis can lead to identification problems with efforts to modify them generally unrewarding. Another problem with the covariance-based SEM is factor indeterminacy of which the case values for the latent variables cannot be obtained in the process (Chin & Newsted, 1999). As a result of this situation, the scores for the latent variables cannot be estimated to predict the observed indicators. Thus covariance-based SEM may not be suitable for studies with a predictive orientation.

A final issue relating to covariance-based SEM is that it places great emphasis on having a strong theoretical foundation. Under covariance-based SEM, it is expected that the analyses are performed using a strong theory with well-developed measures that have gone through a series of exploratory analyses (Chin & Newsted, 1999). This requirement under covariance-based SEM suggests that it might not be an appropriate technique when the theory is relatively tentative or when the measures are newly developed. In this instance the emphasis should be placed more on the data than the theory.

b. Partial Least Squares

Having considered the constraints under covariance-based SEM, a component-based SEM was developed. This approach originated in the 1960s and 1970s by Herman Wold who proposed the solution to the multicollinearity problem, using the PLS regression (Rouse & Corbitt, 2008). Unlike covariance-based SEM, which is concerned with model testing, PLS was introduced with the main objective being prediction (Chin, 1998b; Chin et al., 2003; Chin & Newsted, 1999). Under this approach, the PLS algorithm attempts to obtain the best weight estimates for each block of indicators corresponding to each latent construct. As such, it avoids the indeterminacy problem and provides a precise definition of component scores (Chin et al., 2003). The component score generated for each latent construct will then maximise the variance to explain the dependent variables. Also indicators can be modelled either in a formative or reflective mode (Chin, 1998b).

PLS has also been gaining interest, not only due to its ability to model latent constructs under non-normality conditions (Chin et al., 2003), but also with its minimal demands on measurement scales, where it allows the use of categorical to ratio level indicators in the same model (Chin & Newsted, 1999). In addition to these attributes, sample size is not a constraint in PLS, where it has been proven to perform successfully with a

sample size of as low as 30, to a more complex model with 672 indicators, 21 latent variables and 200 cases (Chin et al., 2003).

To sum up, Chin and Newsted (1999) summarise the key differences between the covariance-based SEM and PLS, as reproduced in Table 4.4.

Table 4.4 Comparison between Covariance-based SEM and PLS

	Criteria	Covariance-based SEM	PLS
1	Objective	Parameter oriented	Prediction oriented
2	Approach	Covariance-based	Component-based
3	Assumptions	Typically multivariate normal distribution and independent observations (parametric)	Predictor specification (nonparametric)
4	Parameter estimates	Consistent	Consistent as indicators and sample size increase
5	Latent variable score	Indeterminate	Explicitly estimated
6	Epistemic relationship between a latent variable and its measures	Typically only with reflective indicators	Can be modelled in either formative or reflective mode
7	Implications	Optimal for parameter accuracy	Optimal for prediction accuracy
8	Model complexity	Small to moderate complexity (e.g. less than 100 indicators)	Large complexity (e.g. 100 constructs and 1,000 indicators)
9	Sample size	Minimal recommendations range from 200 to 800	Minimal recommendations from 30 to 100 cases

Source: Chin and Newsted (1999, p314)

4.2.9.6 Justification for using PLS

The discussion above provides the basis for justifying the use of PLS in this study. PLS was favoured over covariance-based SEM for several

reasons. First, PLS provides better prediction capability, which suits the objective of this study; that is, to predict the tax compliance behaviour. Second, the data distribution in this study does not follow a multivariate normal distribution, which is required under covariance-based SEM, but not under PLS. Third, several constructs in this study are measured in the formative mode, which can fit in the PLS model but not in the covariance-based SEM. Finally, the use of PLS seems more appropriate in this study where most of the measures used are newly developed. The PLS software used in this study is PLS-Graph Version 3.00, Build 1126. The next section describes model evaluation under PLS.

4.2.9.7 PLS Model Evaluation

As PLS does not make any distributional assumptions other than predictor specification, traditional-based techniques (with parametric assumptions) would not be appropriate for significance evaluation. Alternatively, Wold (1980) argues that to be consistent, the PLS approach should apply prediction-oriented measures that are also nonparametric. For that purpose, several techniques were implemented to evaluate both the measurement model and the structural model. The measurement model assessment is crucial to establish the validity and reliability of the model, while the structural model assessment is important for the models predictive capability. The details on the techniques employed are discussed in the following sections.

a. Assessing the Measurement Model

Several statistical measures were adopted in order to confirm the validity and reliability of the Measurement Model. For simplicity purposes, the techniques are discussed in two subsections, entitled construct validity and construct reliability.

i. Construct validity

Construct validity for the formative constructs can generally be determined with reference to the weight score and its corresponding significance level obtained from the bootstrapping procedure in the PLS. These measures indicate the extent to which each indicator contributes to the development of the associated construct. By contrast, for reflective constructs to be valid, they are required to meet the convergent and discriminant validity conditions. The constructs are said to be converged when the indicators loadings reach 0.707 (Chin, 1998b) and the *t*-statistics are 1.96 and above (Gefen & Straub, 2005). This rule of thumb, however, should not be rigid at the early stages of scale development, especially when there are additional indicators for that construct (Chin, 1998b). Average variance extracted (AVE) is another measure of examining convergent validity (Dibbern & Chin, 2005), with an acceptable threshold of 0.5 and above (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). AVEs are automatically generated via the bootstrapping procedure in the PLS based on the following formula:

$$AVE = \frac{\sum \lambda_i^2}{\sum \lambda_i^2 + \sum (1 - \lambda_i^2)}$$

where λ is the loading of each measurement item on its corresponding construct. The AVEs of each construct shows the ratio of the sum of its measurement item variance as extracted by the construct relative to the measurement error attributed to its items (Chin, 1998b; Gefen & Straub, 2005).

To achieve discriminant validity, the constructs are assessed by examining the item cross-loadings and the square root of AVE (Gefen & Straub, 2005). Item cross-loadings were computed in the SPSS program by correlating the latent variable component scores and other indicators besides its own block. To be valid, each block of indicators is expected to have higher loadings in its respective latent variables than indicators for other latent variables. Failure to meet this condition indicates inappropriate measures of the constructs and therefore requires the researcher to reconsider the measures. A comparison between the square root of AVEs and the correlations among the constructs (Fornell & Larcker, 1981) is also used as a means of determining the discriminant validity of the measures. In this case, the constructs are assumed to partly establish the discriminant validity when the square root of the AVE of each construct is larger than

the correlations of the specific construct with any of the other constructs in the model (Chin, 1998a; Gefen & Straub, 2005; Gefen et al., 2000).[71]

ii. Construct reliability

As for construct validity, the reliability of the formative and reflective constructs should also not be assessed in the same manner, given their differences. As mentioned earlier, indicators of formative constructs measure different aspects of the conceptual domain and therefore do not expect to correlate. Thus, unlike reflective constructs which require high internal consistency among their indicators, such traditional consistency reliability measures are not applicable to validate the formative measures.

Alternatively, formative constructs' reliability is normally measured with reference to their multicollinearity status, where excessive multicollinearity implies an unstable model (Petter et al., 2007). In other words multicollinearity among formative construct items is not desirable. To test for the presence of multicollinearity, variance inflation factors (VIFs), condition index statistics and tolerance values are used. A VIF and condition index of lower than 3.3 and 30, respectively (Diamantopolous & Siguaw, 2006), and tolerance values of above 0.3 (Hair et al., 2006), suggest no multicollinearity problem, and hence imply a stable model.

[71] There are no guidelines about how much larger the square root of AVE should be (Gefen & Straub, 2005).

For reflective constructs, the reliability of the measures are normally demonstrated by high Cronbach alpha or internal consistency scores (Petter et al., 2007). However, this study adopts internal consistency scores, also known as composite reliability generated by the PLS bootstrapping analysis, using the following formula:

$$CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum_i (1 - \lambda_i^2)}$$

where λ is the loading of each measurement item on its corresponding construct. This measure of reliability is considered to be more accurate (Brown & Chin, 2004) because it is not influenced by the number of indicators (Hanlon, 2001). Another measure of reliability for reflective constructs is the AVE scales. The scales should exceed 0.5 (Fornell & Larcker, 1981) indicating, "50 percent or more variance of the indicators should be accounted for" (Chin, 1998b, p. 321).

b. Assessing the Structural Model

Prediction-oriented measures, such as the R-squares (R^2), path coefficients and the bootstrapping techniques, are used in this study to evaluate the structural model. All these tests which are nonparametric are used to be consistent with the distribution-free approach of PLS.

i. R-squares

The magnitude of the R^2 for each dependent variable is one important measure to assess the predictive ability of the structural model in the PLS (Chin, 1998b; Dibbern & Chin, 2005). These values indicate the percentage of total variation of the dependent variable explained by the number of independent variables in the model. The interpretation of the R^2 in the PLS is similar to the traditional regression (Vatanasakdakul, 2007), where a higher values of R^2 are desirable. In addition to the ability to predict the overall model, the R^2 can also be explored to examine the impact of a particular independent variable on a dependent variable, known as effect size. The effect size (f^2) values can be obtained based on the following formula:

$$f^2 = \frac{R^2_{included} - R^2_{excluded}}{1 - R^2_{included}}$$

where $R^2_{included}$ is the R^2 of the dependent construct when the particular independent construct is used in the model; and $R^2_{excluded}$ is the R^2 of the dependent construct when the same independent construct is removed from the model (Chin, 1998b). Thus $R^2_{included}$ is always the same, while $R^2_{excluded}$ is generated by creating sub-models. Each sub-model is created by removing each path of the independent construct to the dependent construct one at a time. Once the f^2 is obtained, the degree of effect can be determined with reference to criteria set out by Cohen (1992), where an f^2

= 0.02 indicates a small effect; an f^2 = 0.15 indicates medium effect and an f^2 = 0.35 indicates large effect.

ii. Path coefficients

The path coefficient values indicate the strength of relationships among independent and dependent variables. To be considered meaningful the path coefficients should be around 0.20 and ideally above 0.30 (Chin, 1998a). However, a lower path coefficient does not necessarily indicate that the relationship is unimportant (Brown & Chin, 2004; Dibbern & Chin, 2005; Duarte & Raposo, 2010; Taylor & Todd, 1995). The significance of the path coefficients are checked by performing bootstrapping which is one of the resampling techniques.

iii. Bootstrapping

Bootstrapping and jacknifing are two well-known nonparametric approaches to examine the precision of the PLS estimates. This study employs a bootstrapping technique because it is viewed as more efficient than the jacknife technique, which is an approximation to the bootstrap (Chin, 1998b). Chin (1998b) further describes that in the bootstrapping technique, "N samples set are created in order to obtain N estimates for each parameter in the PLS model. Each sample is obtained by sampling with replacement from the original data set." In this study, a set of 200 subsamples were created for the bootstrapping procedure as suggested by

Chin et al. (2003). The bootstrapping procedure will then generate the *t*-values which were used to assess the significance level of the coefficients.

4.3 Interviews

In addition to the survey instrument, this study involved interviews to provide more information to the data obtained through the survey questionnaires. The use of interviews is appropriate in obtaining either multifaceted or sensitive information, as well as understanding concepts which require elaboration (Hair et al., 2007). Since fairness perceptions and compliance behaviour are considered to be sensitive issues this approach appears to be suitable. In relation to the interview method, research in the social sciences has seen a range of interview approaches, including structured interviews, semi-structured interviews and unstructured interviews. In her book, Roulston (2010) provides the underlying criteria of each type of interview as shown in Table 4.5. With reference to the guidelines this study adopts semi-structured interviews to collect qualitative data. It is anticipated that this approach will provide richer and more accurate data to enhance the findings for this study.

Table 4.5 Range of Interviews

Structured Interviews	**Semi-structured Interviews**	**Unstructured Interviews**
The interviewer follows scripted questions in a particular sequence.	Interview protocol is used as a guide and questions may not always be asked in the same order; the interviewer initiates questions and poses follow up 'probes' in response to the interviewee's descriptions and accounts.	Both interviewer and interviewee initiate questions and discuss topics.
The interviewee chooses responses from a range of fixed options that are coded quantitatively; responses are provided by the interviewer.	The interviewee select own terms to formulate answers to questions; responses are guided by the interviewer's questions.	The interviewee selects own terms to participate in free-flowing conversation.
Asymmetrical structure.	Asymmetrical structure.	Possibly less asymmetrical structure.
Data analysed via deductive analysis for hypothesis testing in multivariate studies.	Data analysed via inductive analytic methods for descriptions and interpretations in interpretive studies.	Data analysed via inductive analytic methods for descriptions and interpretations in interpretive studies.

Source: Roulston (2010, pp. 14-15)

4.3.1 Interview Guide Development

Twelve questions were developed as a guide for the semi-structured interview sessions. These questions were formulated with reference to the topics under study, that is: fairness perceptions; tax knowledge; tax complexity; and compliance behaviour. In addition to this taxpayers' responses in the open-ended question part in the survey were gathered and examined to help the researcher with formulating questions. A copy of the interview questions is included in Appendix 6.

4.3.2 Sample Selection

The participants comprise respondents who have voluntarily expressed their willingness to participate by filling in the consent form attached to the questionnaire package. They were expected to provide their particulars, such as name, address and telephone number in the consent forms, and to post these details with their completed questionnaires. Upon receipt, the consent forms were separated from the completed questionnaires to ensure anonymity of the respondents.

4.3.3 Data Collection Procedures

Interviews were conducted upon completion of the survey method. The potential participants who were identified from the consent forms were subsequently contacted and appointments for the telephone interviews were made. Prior to the interview sessions, the confidentiality and anonymity of the respondents was reiterated to encourage their openness during the interviews. In this study, the telephone interviews were conducted to enable the researcher to interview a number of participants across the two countries in a limited time and at reasonable cost. In addition, it was expected that the participants would be more transparent in the telephone interview sessions compared to the face to face interviews (Synodinos, 2003). The interviews took approximately fifteen to twenty five minutes per session to conduct - following the recommendations of

previous researchers (Lake & Harper, 1987; Synodinos, 2003).[72] The conversations were recorded with the participants' permission to enable the researcher to transcribe them and analyse the data in the later stages of this study.

4.3.4 Data Analysis

Data gathered from interviews were analysed using thematic analysis, a method that identifies, analyses and reports patterns within data. This thematic analysis was performed in six phases following the step-by-step guide by Braun and Clarke (2006). The details of the phases are reproduced in Table 4.6.

Table 4.6 Phases of Thematic Analysis

	Phase	Description of the Process
1	Data familiarisation	Transcribe data, read and re-read the data, note down initial ideas.
2	Initial code generation	Code interesting features of the data in a systematic fashion across the entire data set; collate data relevant to each code.
3	Search for themes	Collate codes into potential themes; gather all data relevant to each potential theme.
4	Review of themes	Check if the themes work in relation to the coded extracts (Phase 1) and the entire data set (Phase 2); generate a thematic map of the analysis.
5	Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generate clear definitions and names for each theme.

[72] According to Synodinos (2003), practitioners advocate the view that telephone interviews should be conducted within an estimated time frame of ten to fifteen minutes. While Lake and Harper (1987) comment that within the general population, a telephone survey can be longer but should not exceed forty five minutes.

6	Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts; relate back the analysis to the research question and literature; produce a scholarly report of the analysis.

Source: Braun and Clarke (2006, p87)

All these phases were manually conducted by the researcher beginning with initial code generation. At this stage the transcribed data was divided into relevant codes that the researcher thought appropriate. This process is much easier since the researcher has familiarised herself with the data while independently conducting the interview and transcribing the data. Subsequent to this, main interview themes were captured, named and analysed to produce a report.

The decision to employ thematic analysis in this study is not merely motivated by its simplicity and wide use in research (Boyatzis, 1998; Braun & Clarke, 2006; Roulston, 2001), but also the benefits the analysis can offer. For instance, Braun and Clarke (2006) had highlighted some advantages of thematic analysis, such as:

(1) flexibility of the method, which allows for a broad range of analytic options;

(2) accessibility of the results to the educated general public;

(3) possibility to emphasise similarities and differences across the data set; and

(4) ability to producing qualitative analyses suited to informing policy development.[73]

4.4 Summary

This methodology chapter describes the process employed to achieve the objectives set out in this study. The discussion was broadly divided into the two approaches of data collection employed, namely survey questionnaires and interviews. Detailed discussion on each approach, encompassing the instrument design, sample selection and procedures, was presented. In addition, the methodology associated with SEM and PLS for survey data analysis was also presented. In the final section, thematic analysis was discussed to justify the use of such analysis on the interview data. In the next two chapters, the results of the survey questionnaire data are discussed and analysed.

[73] See Braun and Clarke (2006) for further advantages of thematic analysis.

Chapter 5

Exploratory Analysis and Results of Survey Data

5.1 Introduction

As indicated earlier, an analysis and the results of the survey data are discussed and analysed in two separate chapters, namely Chapters 5 and 6. In this chapter, the emphasis is given to the exploratory analysis of the data, while Chapter 6 focuses on the regression analysis using Partial Least Squares (PLS). The exploratory analysis includes the response analysis and preliminary analysis of the data. This is followed by a *t*-test analysis to analyse the preliminary hypotheses developed in Chapter 3. Finally, the comments offered in the open-ended questions are presented.

5.2 Response Analysis

In this section, discussions on response rate, response demographic, response bias and response representativeness in New Zealand and Malaysia are presented.

5.2.1 Response Rate

5.2.1.1 New Zealand

In New Zealand, the survey was conducted between September and November 2008. A total of 2,433 mail questionnaires were sent to New

Zealanders listed in the 2008 Preliminary Electoral Roll.[74] The questionnaires were sent along with an accompanying letter and a postage-paid return envelope. The accompanying letter (see Appendix 7) emphasised the research purpose, the guarantee of respondent anonymity and the response deadline.[75] A five-week return date was requested. To increase the response rate, follow-up reminders (together with questionnaires) were subsequently sent to an updated sample of 2,350 with another four weeks given to complete the questionnaires.[76] Out of this sample, 71 questionnaires were returned non-delivered and 12 were returned as the addressees were no longer at the address, leaving the actual number of questionnaires received by potential respondents being 2,267. Over a nine week period, 234 responses were received, giving a response rate of 10.32 percent. The summary of the response rate is presented in Table 5.1.

[74] Even though the targeted sample size was 2,500, sixty-seven cases were found to have incomplete addresses.

[75] The questionnaires were sent to University of Canterbury's Human Ethics Committee for approval prior to their distribution. Their approval was mentioned in the covering letter sent to respondents. Copies of the approval letter and questionnaires are set out in Appendices 1 and 3, respectively.

[76] This figure is derived after taking into account the non-delivered questionnaires during the initial mail out.

Table 5.1 Mail Survey Response Rate
New Zealand

Description	
Initial survey sample size	2,433
Non-delivered after initial mail-out	(83)
Follow-up reminder	2,350
Non-delivered after follow-up reminder	(71)
Total questionnaires delivered	2,279
Delivered but the addressee is no longer at the address	(12)
Questionnaires received by the respondents	2,267
Number of responses	234
Response rate	10.32%

Even though the response rate is considered low compared to the response rates reported in Evans et al. (1997) and Niemirowski and Wearing (2003) of more than 30 percent, it is still between the range of 6 to 16 percent as reported in the literature for global mail surveys (Harzing, 1997).[77] In a review on various tax studies in taxation operation costs across the world, Evans (2003) suggests that the response rate for postal survey varies considerably from the lowest of 2 percent to the highest of 67 percent. Also, the response rate compares favourably with the response rate of 9 percent reported by Slemrod and Venkatesh (2002) who studied income tax compliance costs. A more recent study by Tran-Nam and Karlinsky (2008), who conducted an electronic survey among tax practitioners in Australia, also reported a lower response rate of 8.6 percent.[78] Furthermore, the absolute number of 234 is sufficient to provide the basis for thorough analysis.

[77] It is important to note that these are the surveys which are sent from one country to the other country.

One possible reason for not completing the questionnaires is the subject of research itself (taxation) which is considered a difficult subject. This is based on the comments given by the sample in the blank response section of the questionnaire:

"…unable to supply answers as I have little knowledge of taxes."

"…the questions are outside the scope of my expertise…"

"…I do not have much knowledge on taxation, etc."

Another potential explanation for the non-response is the hesitancy of senior citizens to participate in the survey. As the sample was selected from the Electoral Roll (of which no age information is available), there are chances that the sample would include senior citizens.[79] On the positive side, senior citizens would have more time to respond. However, the possibility of this group not responding is also high due to their age, as noted below:

"…I am 86!! And wish to decline…"

---

[78] In this study, the survey was sent through electronic mail to 1,998 tax practitioners with the help of CPA Australia.

[79] Although these senior citizens may have retired, their opinions of the income tax system are still relevant as they have other incomes such as interest, rental and dividend from their investments.

"…at 75 years, I am not up on this type of thing…"

"…I am not going to participate as I consider I am too old to give relevant answers."

"…regretfully, owing to my age (87.4 years), I am too old to help with your survey…"

Furthermore, the difficulty in obtaining responses may have been due to the lack of interest in the subject. This is particularly true when the request to participate in questionnaires and surveys has grown enormously (Harzing, 1997).

5.2.1.2 Malaysia

In Malaysia, the survey was conducted between February and May 2009. To be consistent with New Zealand, 2,267 questionnaires were distributed to the sample with the help of Human Resource Personnel or the Head of Department in the respective organisations (see Chapter 4, section 4.1.3 for details on sample selection).[80] Prior to that, the researcher personally met with the organisations' representatives to describe the nature of the study

[80] These 18 organisations were selected from various ministries and private sectors in Malaysia.

and discuss the number of potential respondents required.[81] A letter of support from the Economic Planning Unit of the Prime Minister's Office was supplied to the representatives to encourage them with respect to the significance of the study.

Similar to New Zealand, potential respondents were also provided with questionnaires and an accompanying letter (see Appendix 8), emphasising the research purpose, the guarantee of respondent anonymity and the response deadline of a five week period. Follow-up reminders (with questionnaires), however, were not sent to the potential respondents as the representatives were hesitant to do so due to their busy schedules. Alternatively, telephone call reminders were made to the representatives requesting them to remind the potential respondents to return the questionnaires.[82] As an effort to further increase the response rate, the potential respondents were given a University of Canterbury bookmark to encourage them to complete the questionnaires as suggested by Dillman (2007). Overall, 926 responses were received, giving a response rate of 40.85 percent.

[81] The representatives were requested to distribute about six to 15 questionnaires to the employees in their organisations depending on the number of employees available and meet the criterion of tax filing experience.

[82] As a token of appreciation, all representatives were given New Zealand key-chains for their support.

As anticipated, the response rate in Malaysia is significantly higher than the response rate in New Zealand due in part to the different approach in administering the survey.[83] As described earlier, a mail survey was used in New Zealand, while in Malaysia, a personal delivery approach was adopted. Previous studies suggest the response rates for personal delivery surveys range from 28 to 50 percent (Dillman, 2007), as opposed to 6 to 16 percent in global mail surveys (Harzing, 1997).

Table 5.2 Survey Response Rate
Malaysia

Description	
Survey sample size	2,267
Number of responses	926
Response rate	40.85%

5.2.2 Response Demographics

Tables 5.3 to 5.15 set out the profile of the samples in both New Zealand and Malaysia in relation to age, gender, ethnicity, relationship status, number of dependents, education, annual income, source of income or work sector, work experience, geographical location, filing experience, the most recent filing year and experience dealing with the Inland Revenue authority.

[83] See data collection procedures section in Chapter 4 for details.

5.2.2.1 Age

In New Zealand about 60 percent of the respondents are in the 30-59 age bracket (Table 5.3). Another 30 percent are senior citizens while the remaining 9 percent are below 30 years of age. Similarly, in Malaysia, the majority of respondents (84.7 percent) are in the 30-59 age bracket. It comes as no surprise that only one respondent is in the group of 60 or over as the mandatory retirement age for Malaysians is 58.[84]

Table 5.3 Survey Respondents by Age

	New Zealand		Malaysia	
Age	Frequency	Percent	Frequency	Percent
Under 20	3	1.3	na	na
20-29	18	7.7	132	14.3
30-39	41	17.5	292	31.5
40-49	51	21.8	320	34.6
50-59	49	20.9	172	18.6
60 or over	70	29.9	1	0.01
Total	232	99.1	917	99.0
Missing	2	0.9	9	1.0
Total	234	100.0	926	100.0

5.2.2.2 Gender

Table 5.4 shows that male and female respondents are almost equally represented in both countries, although more so in Malaysia.

[84] This mandatory retirement age is only applicable to public servants. However, they can continue to work within either the public or private sector on a contract basis. There is no specific retirement age for those employed in the private sectors.

Table 5.4 Survey Respondents by Gender

	New Zealand		Malaysia	
Gender	Frequency	Percent	Frequency	Percent
Male	109	46.6	458	49.5
Female	122	52.1	459	49.6
Total	231	98.7	917	99.0
Missing	3	1.3	9	1.0
Total	234	100.0	926	100.0

5.2.2.3 Ethnicity

The majority of the respondents (83 percent) in New Zealand were New Zealand European while Maori accounted for less than four percent (Table 5.5). This might be due to the use of General Electoral Roll only and not the separate Maori Roll in the sample selection process. As anticipated, the majority of respondents (93 percent) in Malaysia are Malays as they form a substantial proportion of employees in the service delivery sector (particularly in the public sector). In contrast, Chinese and Indians engage more in businesses or professional firms, but those organisations are not covered in this study.

Table 5.5 Survey Respondents by Ethnicity

	New Zealand			Malaysia	
Ethnicity	Frequency	Percent	Ethnicity	Frequency	Percent
NZ European	193	82.5	Malay	860	92.9
Maori	8	3.4	Chinese	29	3.1
Polynesian	1	0.4	Indian	23	2.5
Indian	1	0.4	Others	7	0.8
Chinese	5	2.1	Total	919	99.2
Non-Chinese Asian	3	1.3	Missing	7	0.8
Other	20	8.5	Total	926	100.0
Total	231	98.7			
Missing	3	1.3			
Total	234	100.0			

5.2.2.4 Relationship Status

In New Zealand, 21 percent of the respondents are single while the majority have partners (either through marriage, defacto or civil union relationships). A similar pattern can be seen in Malaysia with 86 percent married and 13 percent single (Table 5.6).

Table 5.6 Survey Respondents by Relationship Status

	New Zealand			Malaysia	
Status	Frequency	Percent	Status	Frequency	Percent
Married	143	61.1	Married	794	85.7
Single	48	20.5	Single	124	13.4
Defacto	28	12.0	Total	918	99.1
Civil union	1	0.4	Missing	8	0.9
Other	10	4.3	Total	926	100.0
Total	230	98.3			
Missing	4	1.7			
Total	234	100.0			

5.2.2.5 Number of Dependents

While the majority (60 percent) of respondents in New Zealand have no dependents, the equivalent in Malaysia is 11 percent; with about 30 percent of Malaysian respondents have three to four people under their care (Table 5.7). This suggests that financial responsibility is much higher for Malaysian respondents than their New Zealand counterparts.

Table 5.7 Survey Respondents by Number of Dependents

	New Zealand		Malaysia	
No. of Dependents	Frequency	Percent	Frequency	Percent
zero	140	59.8	99	10.7
1	39	16.7	57	6.2
2	34	14.5	114	12.3
3	10	4.3	136	14.7
4	3	1.3	133	14.4
5	2	0.9	115	12.4
More than 5	1	0.4	95	10.2
Total	229	97.9	749	80.9
Missing	5	2.1	177	19.1
Total	234	100.0	926	100.0

5.2.2.6 Education

The majority of respondents in New Zealand and Malaysia are at least holders of a Diploma or Degree, at 49.6 percent and 64.2 percent, respectively (Table 5.8). While about 10 percent of respondents in New Zealand have no formal schooling qualification, such a situation is not seen in the Malaysian responses, as the minimal requirement for an individual to work in either the public or private sector is to obtain the Malaysian Certificate of Education.

Table 5.8 Survey Respondents by Education

	New Zealand			Malaysia	
Level of Education	Frequency	Percent	Level of Education	Frequency	Percent
No formal schooling	23	9.8	SPM/MCE*	223	24.1
Year 11 or NCEA level 1	36	15.4	STPM/MHCE**	99	10.7
Year 12 or NCEA level 2	22	9.4	Diploma or Degree	453	48.9
Year 13 or NCEA level 3	31	13.2	Masters or PhD	142	15.3
Diploma or degree	77	32.9	Total	917	99.0
Honours degree	13	5.6	Missing	9	1.0
Masters or PhD	26	11.1	Total	926	100.0
Total	228	97.4			
Missing	6	2.6			
Total	234	100.0			

***** SPM is the abbreviation for Sijil Pelajaran Malaysia, which is equivalent to Malaysian Certificate of Education.
**STPM is the abbreviation for Sijil Tinggi Pelajaran Malaysia, which is equivalent to Malaysian Higher Certificate of Education.

5.2.2.7 Annual Income

While a sizeable number of respondents (30 percent) in New Zealand earn NZ$30,000 or below, about a quarter earn more than NZ$70,000 a year (Table 5.9). In Malaysia, a large minority (46 percent) have an annual income bracket of MYR30,001-MYR40,000 (equivalent of NZ$13,622-NZ$18,163). When compared to New Zealand, only 11 percent of the respondents claimed that they receive more than MYR70,000 (equivalent of NZ$31,786) a year.

Table 5.9 Survey Respondents by Annual Income

Annual Income*	New Zealand		Malaysia		Conversion of MYR to NZ$[85]
	Frequency	Percent	Frequency	Percent	
Less than 20,000	45	19.2	na	na	Less than 9,082
20,000 – 30,000	25	10.7	na	na	9,082-13,622
30,001 – 40,000	27	11.5	428	46.2	13,623-18,163
40,001 – 50,000	27	11.5	210	22.7	18,164-22,704
50,001 – 60,000	29	12.4	94	10.2	22,705-27,245
60,001 – 70,000	17	7.3	67	7.2	27,246-31,786
More than 70,000	58	24.8	98	10.9	More than 31,786
Total	228	97.4	897	96.9	
Missing	6	2.6	29	3.1	
Total	234	100.0	926	100.0	

*Annual income is in respective currency (New Zealand – NZ$; Malaysia – MYR)

5.2.2.8 Source of Income/ Work Sector

In New Zealand, the majority of respondents are salary or wage earners (at 57 percent), followed by self-employed people at 12 percent (Table 5.10). Eleven percent derived interest or dividend income, and another nine percent are on government benefits. In Malaysia, respondents were asked about their working sector, of which 67 percent and 31 percent are in the public and private sectors, respectively.

[85] The conversion rate is based on average annual conversion rate in 2009 obtained from http://www.oanda.com/currency/average.

Table 5.10 Survey Respondents by Source of Income/Work Sector

	New Zealand			Malaysia	
Source of Income	Frequency	Percent	Working Sector	Frequency	Percent
Salary/wages	134	57.3	Public	619	66.8
Interest/dividends	27	11.5	Private	290	31.3
Rent	10	4.3	Total	909	98.2
Royalties	1	0.4	Missing	17	1.8
Self-employed	28	12.0	Total	926	100.0
Benefits	22	9.4			
Other	9	3.8			
Total	231	98.7			
Missing	3	1.3			
Total	234	100.0			

5.2.2.9 Work Experience

The majority of respondents in both countries have more than 10 years of working experience: 84 percent (New Zealand) and 68 percent (Malaysia) (Table 5.11). This shows that the respondents of the study have considerable work experience and have been contributing by way of paying tax for a sizeable number of years (especially in New Zealand).

Table 5.11 Survey Respondents by Work Experience

	New Zealand		Malaysia	
Work Experience	Frequency	Percent	Frequency	Percent
Less than a year	3	1.3	21	2.3
1 – 4 years	15	6.4	92	9.9
5 – 9 years	17	7.3	175	18.9
10 – 19 years	45	19.2	295	31.9
20 years or more	152	65.0	334	36.1
Total	232	99.1	917	99.0
Missing	2	0.9	9	1.0
Total	234	100.0	926	100.0

5.2.2.10 Geographical Location

Table 5.12 shows that majority (57 percent) of the New Zealand respondents are either from the Auckland, Wellington or Canterbury regions. Waikato, Bay of Plenty, Hawke's Bay and Otago come second with 23 percent. In Malaysia, about 30 percent are from the northern region followed by the central region with 25 percent. Southern and East Coast regions each provide about 22 percent of responses.

Table 5.12 Survey Respondents by Geographical Location

	New Zealand			Malaysia	
Area	Frequency	Percent	Area	Frequency	Percent
Auckland, Wellington and Canterbury	134	57.3	Northern states	275	29.7
Waikato, Bay of Plenty, Hawke's Bay and Otago	54	23.1	Central states	234	25.3
Northland, Gisborne, Taranaki, Manawatu Wanganui, Nelson and Southland	36	15.4	Southern states	205	22.1
West Coast, Tasman and Marlborough	5	2.1	East Coast states	206	22.2
Other	4	1.7	Total	920	99.4
Total	233	99.6	Missing	6	0.6
Missing	1	0.4	Total	926	100.0
Total	234	100.0			

5.2.2.11 Filing Experience

It can be seen in Table 5.13 that most respondents in both New Zealand and Malaysia have filed tax return forms more than five times, at 72 percent and 54 percent, respectively. This indicates their experience with

the tax filing procedures and that their views and perceptions in this study should come from a solid base.

Table 5.13 Survey Respondents by Filing Experience

	New Zealand		Malaysia	
Filing Experience	Frequency	Percent	Frequency	Percent
Never	18	7.7	146	15.8
Once	10	4.3	67	7.2
2 – 5 times	36	15.4	157	17.0
More than 5 times	169	72.2	501	54.1
Total	233	99.6	871	94.1
Missing	1	0.4	55	5.9
Total	234	100.0	926	100.0

5.2.2.12 Filing Year

In addition to their sizeable filing experience, the largest group of the respondents also claim that the most recent year that they have filed tax return forms was in 2008 (Table 5.14). This indicates that they should still have a fresh memory of their filing experience when completing this survey (especially given the surveys were conducted in 2008 and 2009, in New Zealand and Malaysia, respectively).

Table 5.14 Survey Respondents by the Recent Filing Year

	New Zealand		Malaysia	
Year	Frequency	Percent	Frequency	Percent
2008	104	44.4	509	55.0
2007	43	18.4	179	19.3
2006	6	2.6	25	2.7
2005	4	1.7	10	1.1
Not lodged in last five years	73	31.2	65	8.2
Total	230	98.3	788	85.1
Missing	4	1.7	138	14.9
Total	234	100.0	926	100.0

5.2.2.13 Experience with the Inland Revenue Authority

Respondents were also requested to indicate the number of times they have dealt with the tax authority. While a high majority of respondents (66 percent) in New Zealand have experienced dealing with the Inland Revenue at least two times, a slightly higher percentage is seen in Malaysia at 70 percent (Table 5.15). On the other hand, approximately 21 percent (New Zealand) and 15 percent (Malaysia) of the respondents have no experience in dealing with Inland Revenue.

Table 5.15 Survey Respondents by Experience Dealing with the Inland Revenue

Experience with Inland Revenue	New Zealand		Malaysia	
	Frequency	Percent	Frequency	Percent
Never	48	20.5	136	14.7
Once	29	12.4	125	13.5
2 – 5 times	83	35.5	314	33.9
More than 5 times	71	30.3	337	36.4
Total	231	98.7	912	98.5
Missing	3	1.3	14	1.5
Total	234	100.0	926	100.0

5.2.3 Non-Response Bias

To test if there is any non-response bias on the samples, a *t*-test analysis was performed comparing the early responses to responses generated after follow-ups (Benke & Street, 1992). The late responses are used as proxies for non-respondents (Leong, 1980). The samples were compared on their perceptions on 20 fairness perception items. Forty samples from each group were selected to compute the mean, standard deviation and the two-

tailed *p*-value. In order to decide whether the groups were significantly different from each other, the two-tailed *p*-value was examined.

5.2.3.1 New Zealand

The results from New Zealand sample are presented in Table 5.16, illustrating the mean and standard deviation of the early and late responses, together with the corresponding two-tailed *p*-value (full results of the test are available in Appendix 9). The results show that the majority of the items have a *p*-value of more than 0.05, indicating that both groups are not significantly different. For two items (EF1 and EF3R), with corresponding two-tailed *p*-value of less than 0.05 but higher than 0.01, the result suggests that both groups are similar at 1 percent significance level. While the results provide an indication that there is no problem of response bias among the early and late responses in the New Zealand sample, it is important to note that they do not guarantee that the sample is completely free of non-response bias considering the low response rate achieved.

Table 5.16 Mean and Standard Deviation of Early and Late Responses New Zealand

	Response	N*	Mean	Std. Deviation	*p*-value (two-tailed)
GF1	early response	40	4.73	1.396	.704
	late response	40	4.60	1.533	
GF2	early response	39	2.90	1.447	.465
	late response	40	2.65	1.545	
GF3R	early response	40	3.80	2.078	.129
	late response	40	3.10	1.997	
EF1	early response	40	4.08	1.789	.022
	late response	40	3.18	1.647	
EF2	early response	40	4.15	1.578	.947
	late response	40	4.18	1.796	
EF3R	early response	39	3.03	1.530	.047
	late response	39	2.31	1.608	
HF1	early response	40	5.38	1.531	.827
	late response	40	5.30	1.522	
HF2	early response	40	5.48	1.320	.408
	late response	40	5.23	1.368	
HF3	early response	40	4.93	1.474	.678
	late response	39	5.08	1.753	
VF1	early response	40	4.70	1.897	.384
	late response	40	4.35	1.673	
VF2	early response	40	4.73	1.617	.165
	late response	40	4.20	1.728	
VF3R	early response	40	3.63	1.659	.848
	late response	40	3.55	1.825	
RF1R	early response	40	4.05	2.012	.433
	late response	40	4.43	2.241	
RF2	early response	40	5.25	1.676	.557
	late response	40	5.45	1.339	
RF3	early response	40	4.03	1.187	.685
	late response	40	3.90	1.533	
PF1	early response	40	5.65	1.477	.534
	late response	40	5.43	1.738	
PF2R	early response	39	4.00	1.622	.078
	late response	40	3.33	1.730	
PF3	early response	40	5.18	1.279	.741
	late response	39	5.28	1.572	
AF1	early response	40	3.88	1.202	.457
	late response	40	3.65	1.477	
AF2	early response	40	3.68	1.385	.406
	late response	40	3.93	1.289	

*The sample selected for each group was 40. However, some of the questions were left unanswered, that gave rise to a sample of 39.

5.2.3.2 Malaysia

A similar approach was applied to the Malaysian sample and the results are set out in Table 5.17 (refer Appendix 10 for full results). The two-tailed *p*-values were utilised to determine the similarity of the groups. Overall, the results showed that both groups are not significantly different.[86] This indicates that there is likely to be no bias in the Malaysian sample.

[86] The two-tailed *p*-values for VF3R, RF2 and PF1 are less than 0.05 but higher than 0.01. This means that at 1 percent significance level, the claim that both groups are similar is true.

Table 5.17 Mean and Standard Deviation of Early and Late Responses Malaysia

	Response	N**	Mean	Std. Deviation	*p*-value (two-tailed)
GF1	early response	40	4.33	1.730	.438
	late response	40	4.60	1.411	
GF2	early response	40	4.53	1.710	.822
	late response	40	4.60	1.215	
GF3R*	early response	40	3.68	1.886	.718
	late response	39	3.54	1.430	
EF1	early response	40	4.10	1.707	.221
	late response	40	4.50	1.132	
EF2	early response	38	5.97	1.479	.069
	late response	38	5.42	1.106	
EF3R*	early response	38	3.11	1.573	.383
	late response	39	3.38	1.184	
HF1	early response	40	3.75	2.157	.746
	late response	39	3.90	1.861	
HF2	early response	38	3.95	1.859	.084
	late response	39	4.59	1.292	
HF3	early response	40	4.55	1.694	.052
	late response	40	3.85	1.477	
VF1	early response	40	5.80	1.305	.122
	late response	40	5.35	1.272	
VF2	early response	38	5.89	1.448	.551
	late response	39	5.72	1.123	
VF3R*	early response	38	4.74	1.913	.046
	late response	39	4.03	0.986	
RF1R*	early response	37	3.86	1.988	.573
	late response	39	3.64	1.386	
RF2	early response	38	5.82	1.036	.028
	late response	39	5.28	1.050	
RF3	early response	38	4.66	1.665	.854
	late response	39	4.59	1.585	
PF1	early response	40	5.68	1.269	.002
	late response	40	4.80	1.224	
PF2R*	early response	39	3.85	1.710	.484
	late response	40	3.60	1.392	
PF3	early response	38	5.42	1.553	.425
	late response	39	5.67	1.084	
AF1	early response	38	4.92	1.343	.802
	late response	38	4.84	1.386	
AF2	early response	38	4.74	1.571	.208
	late response	39	4.28	1.572	

* The scores for these items were reversed to reflect the interpretation as indicated in this study.

**The sample selected for each group was 40. However, some of the questions were left unanswered, that gave rise to a sample of 39.

5.2.4 Response Representativeness

One method of establishing response representativeness is by comparing the demographic background of the responses with the entire population (McInnis, 2006). In this study, the responses were compared on three criteria: gender; annual median income; and source of income (New Zealand) or work sector (Malaysia).

5.2.4.1 New Zealand

From Table 5.18, the survey responses reflect reasonably well the total population of New Zealand. For example, in terms of gender, the percentage for male and female respondents is 47 and 53 percent, respectively, which is comparable to the total population of 49 (male) and and 51 (female) percent (Statistics New Zealand, 2008a). The weekly median income bracket of NZ$769-NZ$961 in the survey responses is, however, higher than the population's median income of NZ$537 a week (Statistics New Zealand, 2008b). This deviation might be due to the computation of the population's median income which includes those with no source of income.

With regard to source of income, typically wages and salaries are the most common source for the working age population of New Zealand, at 54 percent. People receiving investment income follows this at 34 percent, while self-employed people only account for 12 percent (Statistics New

Zealand, 2008b).[87] The survey responses demonstrate a similar pattern with 58 percent being salary and wage earners, followed by people receiving investment income at 17 percent, and another 12 percent self-employed.

In sum, comparing the survey responses with the total population on three criteria signifies no major differences. Thus, it can be concluded that the responses are representative of the total New Zealand population.

[87] The working age population in this study includes those of 15 years and above.

Table 5.18 Comparison between Population and Survey Responses New Zealand

	Population		Survey Response*	
Criteria	**Number**	**Percent**	**Number**	**Percent**
Total number in 2008[a]	4,271,100	100	231	100.0
Gender[a]				
Male	2,093,300	49.0	109	47.2
Female	2,177,800	51.0	122	52.8
Weekly income				
Median	537		769-961	
Source of income[b]				
Salary/wages	178,739,31	54.3	134	58.0
Investment	112,576,14	34.2	38	16.5
Self-employed	38,512,890	11.7	28	12.1
Others[d]	110,930,29	33.7	31	13.4

* Exclude sample with missing data.

[a] The reported number for population is extracted from Statistics New Zealand (2008a).

[b] It is possible for a person (from the population) to receive more than one source of income and so these percentages sum to more than 100 percent.[88] While in the survey response, the percentages merely represent respondents' main source of income. Thus, it comes to no surprise that the percentages for the total population receiving incomes from investments and other sources were much higher than the percentages reported among the survey responses. To illustrate, a person who receives salary and also dividend as his/her secondary income will be considered as both receiving salary and investment incomes in calculating the percentage for the population. However, for the survey response, the researcher is only interested in the main source of income, which is, in this case, income from salary.

[c] Includes income from interests, dividends, rental property and royalties.

[d] Includes government transfers, other transfers, benefits, etc.

5.2.4.2 Malaysia

Table 5.19 sets out the comparison between the survey responses and the total population in Malaysia. In terms of gender, it appears that the survey responses (equally represented by male and female of 50 percent each) are comparable to the percentage reported for the population (51 percent and 49 percent for male and female, respectively). The average monthly income bracket of MYR3,334-4,167 (equivalent to NZ$1,514-NZ$1,892)

is also in comparison with MYR3,686 (equivalent to NZ$1,674) in the population (Economic Planning Unit Malaysia, 2007a).[89] In terms of working sector, however, the percentage of the survey responses is not comparable to the total population. The public sector was over represented and the private sector was under represented. This is not surprising, given the method of distribution. However, a major concern of mail surveys is representativeness of the sample (Tran-Nam et al., 2000). Notwithstanding this, the samples can still be considered representative with one or two minor and unimportant exceptions (Evans et al., 1996, pp. 103-105). Hence, based on these three criteria, the results indicate that the survey responses are to a reasonable degree representative of the total population.

[88] The population number is calculated based on the total population (3,291,700) aged 15 years and above (Statistics New Zealand, 2008b).

[89] The conversion rate is based on average annual conversion rate of 0.45409 in 2009 obtained from http://www.oanda.com/currency/average.

Table 5.19 Comparison between Population and Survey Responses Malaysia

	Population		Survey Response*	
Criteria	**Number**	**Percent**	**Number**	**Percent**
Total number in 2008[a]	27,728,700	100.0	917	100.0
Gender[b]				
Male	14,141,637	51.0	458	50.0
Female	13,587,063	49.0	459	50.0
Average monthly income (MYR)	3,686[c] (NZ$1,674)		3,334-4,167 (NZ$1,514-NZ$1,892)	
Working Sector			909	100.0
Public	1,244,365[d]	47.9	619	68.1
Private	1,353,400[e]	52.1	290	31.9

* Exclude sample with missing data.

[a] The reported number for the population is extracted from the (Department of Statistics Malaysia, 2008a).

[b] This figure is derived based on the ratio of 104 males for every 100 females.

[c] This is the mean household income for the year 2007, obtained from the Distribution Section, Economic Planning Unit, Malaysia (Economic Planning Unit Malaysia, 2007a).

[d] The reported number for the population is extracted from the Annual Report of the Public Service Department Malaysia (2008).

[e] This figure is derived by adding the number of employees in the services sector, such as hotels and restaurants, transportation and communication, financial institutions, education and health and social works. This 2008 data is obtained from Manpower and Social Statistics Division, Department of Statistics Malaysia (Department of Statistics Malaysia, 2008b).

To conclude, the examination on the response characteristics demonstrates that not only do the samples in New Zealand and Malaysia have no observable problem of non-response bias, but also they are largely representative of the total populations. These rich and diverse samples should therefore provide sufficient variance for testing the proposed model and increase the generalisability of the study findings.

5.3 Preliminary Analysis

The preliminary analysis involves two phases; that is, missing value analysis and descriptive analysis.

5.3.1 Missing Value Analysis

A preliminary analysis on missing data was carried out to produce clean data for the proposed model analysis. This is essential in order to eliminate any outlying responses that may generate invalid results (Alreck & Settle, 1995).

5.3.1.1 New Zealand

Upon reviewing the New Zealand data, five responses were identified with missing values of more than 10 percent and thus deleted as suggested by Hair et al. (2006). Further Cohen (1992) recommend that cases with missing data for the dependent variable should be deleted from the regression analysis. This is to avoid any artificial increase in relationships with independent variables (Hair et al., 2006). Applying this suggested approach in the structural equation modelling (SEM), which involves multiple dependent constructs, (with each construct usually measured with several indicators), cases that have missing values for all indicators of one or more constructs in the model were deleted (Venaik, 1999). Based on this criterion, another 10 responses were deleted, leaving the final sample of 219 for further analysis.

5.3.1.2 Malaysia

A similar approach was carried out on the Malaysian responses, resulting in the deletion of: (1) 65 cases due to missing data of more than 10 percent; (2) five cases of suspected duplicated copies; and (3) another four cases, following the recommendations of Cohen (1992) and Hair et al. (2006). Subsequent to the data examination, 852 responses were finally used for the analysis.

After this initial screening, leaving 219 and 852 responses in New Zealand and Malaysia, respectively, and with 70 indicators for each case, approximately two to four percent had missing values. The Expected Maximisation (EM) approach was selected to replace these missing values. This approach uses the estimation of the means, the covariance matrix and the correlation of quantitative variables with missing values, using an iterative process. According to Pallant (2005), this method is generally superior to listwise, pairwise and mean substitution approaches, particularly with small sample sizes (less than 250) and large amounts of missing data (Hair et al., 2006).

5.3.2 Descriptive Analysis

Descriptive statistics are normally used to describe the basic features of the data. Thus, the mean, standard deviation, minimum and maximum value for each indicator were obtained through descriptive statistics in SPSS. The

same measures for each construct were also checked. Tables 5.20 to 5.27 outline the statistics by each construct showing sufficient range and variance. The column labelled "measures" includes the name of the construct (in bold) and the respective indicators as per questionnaire. The revealed scores span across the entire 7-point Likert scale.

5.3.2.1 New Zealand

a. Fairness Perceptions

Table 5.20 presents the descriptive statistics on fairness perceptions. The higher the mean reflects the fairer perceptions on the tax system, and vice versa. From Table 5.20, it indicates that horizontal fairness was the only fairness dimension with a mean of more than 5.0 for all its indicators, which consequently results in higher mean for the construct 'horizontal fairness' itself, at 5.39. This suggests that the respondents overwhelmingly agreed that the current tax system has equally treated the taxpayers with similar levels of income. Administrative fairness had mean values for both indicators of below 4.0 (which results in low mean value of 3.86 for the construct), suggesting that the respondents perceived the administration of the tax system currently as unfair. For general fairness and exchange fairness, the perceptions on fairness indicators were mixed but leaning towards negative judgments, as opposed to vertical fairness, retributive fairness and personal fairness, which were more inclined to positive judgments. These observations were confirmed with the mean values of the

constructs, which indicate similar results. For example, the mean values of the constructs general fairness and exchange fairness were 3.60 and 3.65, respectively, indicating respondents' negative perceptions of fairness.

Table 5.20 Descriptive Statistics on Fairness Perceptions New Zealand

Measures	Code	N	Min	Max	Mean	Std. Dev.
General fairness	**GF**	219	1	7	3.60	1.134
I believe the government utilizes a reasonable amount of tax revenue to achieve social goals, such as the provision of benefits for low income families.	GF1	219	1	7	4.59	1.505
I believe everyone pays their fair share of income tax under the current income tax system	GF2	219	1	7	3.03	1.617
I think the government spends too much tax revenue on unnecessary welfare assistance.*	GF3R	219	1	7	3.23	1.943
Exchange fairness	**EF**	219	1	7	3.65	1.194
I receive fair value from the government in return for my income tax paid (e.g. benefits)	EF1	219	1	7	3.70	1.737
It is fair that low-income earners receive more benefits from the government compared to high-income earners.	EF2	219	1	7	4.44	1.643
The income taxes that I have to pay are high considering the benefits I receive from the government.*	EF3R	219	1	7	2.86	1.595
Horizontal fairness	**HF**	219	1	7	5.39	1.162
It is fair for individuals with similar amounts of income to pay a similar amount of income tax.	HF1	219	1	7	5.51	1.469
I believe it is fair for me to pay a similar share of income tax compared with other taxpayers earning an equivalent amount of income.	HF2	219	1	7	5.54	1.257
It is fair that 'equals before tax are equals after tax'. For example, if a person earning $100,000 before tax pays $20,000 tax, everyone earning $100,000 income before tax should be left with $80,000 after tax.	HF3	219	1	7	5.16	1.632
Vertical fairness	**VF**	219	1	7	4.38	1.318
It is fair that high-income earners are subject to tax at progressively higher tax rates than low-income earners.	VF1	219	1	7	4.72	1.769
It is fair that low-income earners are taxed at a lower rate than middle-income earners.	VF2	219	1	7	4.71	1.590
The share of the total income taxes paid by high-income earners is much too high.*	VF3R	219	1	7	3.77	1.666

Retributive fairness	**RF**	219	1	7	4.58	1.033
It is fair that individuals who deliberately evade paying their taxes should be penalised with the same amount of penalty regardless of the amount of tax evaded.*	RF1R	219	1	7	4.24	2.130
To be fair, the degree of punishment for evading tax should depend on the degree of non-compliance.	RF2	219	1	7	5.53	1.319
I believe the initial late payment penalty on the unpaid tax, imposed on non-compliant taxpayers under the current tax system, is fair.	RF3	219	1	7	4.03	1.387
Personal fairness	**PF**	219	1	7	4.71	1.059
I believe that I pay my fair share of the tax burden under the current income tax system.	PF1	219	1	7	5.32	1.747
Compared to other taxpayers, I pay more than my fair share of income tax.*	PF2R	219	1	7	3.64	1.596
Middle-income earners pay their fair share of income tax.	PF3	219	1	7	5.27	1.401
Administrative fairness	**AF**	219	1	7	3.86	1.104
There are a number of ways available to me to correct errors in the calculation of my tax liability, if necessary, at no additional cost.	AF1	219	1	7	3.84	1.356
The administration of the income tax system by the Inland Revenue Department is consistent across years and taxpayers.	AF2	219	1	7	3.95	1.350

* The scores for these items were reversed to reflect the interpretation as indicated in this study.

b. Tax Knowledge and Tax Complexity

Descriptive statistics with regard to perceptions on taxpayers' tax knowledge and complexity of the tax system are presented in Table 5.21. To interpret the data, a higher mean value indicates better knowledge of tax but less complexity in the tax system. Overall, respondents perceived themselves as having good knowledge of tax except in one technical knowledge item, which had a slightly lower mean value. In relation to complexity of the tax system the perceptions on indicators for both complexity dimensions were mixed. For content complexity, mean values

for each indicator (and the construct) of 4.0 and below showed that generally respondents perceived the content of the tax system as complex. With regard to compliance complexity, two of the three indicators had mean values below 4.0, suggesting negative perceptions on compliance complexity. However, observing the mean value of the construct (of 4.12) indicates better perceptions. These results suggest that even though respondents claimed that much effort was needed to understand and maintain relevant records to comply with their tax obligations, they seemed to have no problems with completing and filing their tax return forms.

Table 5.21 Descriptive Statistics on Tax Knowledge and Tax Complexity New Zealand

Measures	Code	N	Min	Max	Mean	Std. Dev.
General knowledge	**GK**	219	1	7	5.71	1.069
The income tax system is a legitimate way for the government to collect revenue to manage an economy.	GK1	219	2	7	5.80	1.190
To my knowledge, individuals are subject to a single flat rate of income tax under the current tax system.*	GK2R	219	1	7	5.66	1.650
Legal knowledge	**LK**	219	1	7	5.62	0.911
As far as I am aware, non-compliant taxpayers can be imprisoned, if found guilty of evading tax.	LK1	219	1	7	5.14	1.412
Similar to other criminal offences, I believe that individuals can also be prosecuted for not complying with the Income Tax Act.	LK2	219	1	7	5.79	1.299
I believe that I do not have to abide by the deadline for the submission of tax return form (s) (in case of having other income such as rental and business income), as the deadline is only a guideline and does not result in penalties.*	LK3R	219	1	7	5.93	1.444
Technical knowledge	**TK**	219	1	7	4.77	0.811
As far as I am aware, everyone who earns income sourced in this country is taxable, regardless of whether that person is resident or not.	TK1	219	1	7	5.61	1.527

I am sure that I am not required to file a tax return on interest income that I earn from money deposited in a bank account in New Zealand as it will be subject to income tax at source.	TK2	219	1	7	4.09	2.211
To my knowledge, I can deduct all personal expenses in calculating my tax liability.*	TK3R	219	1	7	5.56	1.689
I have little idea about the deductions that I can claim as a taxpayer in the computation of my tax liability.*	TK4R	219	1	7	3.84	1.943
Content complexity	**CT**	219	1	7	3.85	1.244
I think the term used in tax publications (eg. IRD guide books) and in tax return forms are difficult for people like me to understand.*	CT1R	219	1	7	4.00	1.811
The sentences and wording in the Individual Income Tax Return Guide (IR3G) are lengthy and not user-friendly.*	CT2R	219	1	7	3.86	1.579
The rules related to individual income tax are clear.	CT3		1	7	4.01	1.456
Most of the time I need to refer to others for assistance in dealing with tax matters.*	CT4R	219	1	7	3.57	1.913
Compliance complexity	**CM**	219	1	7	4.12	1.200
I do not have a problem with completing and filing the tax return form(s), if they are required.	CM1	219	1	7	4.87	1.754
I find it tedious to maintain all my relevant records for the whole year for tax purposes (if I have to complete the tax return form(s)).*	CM2R	219	1	7	3.76	1.782
I do not have to make a lot of effort to understand the explanations given in Inland Revenue Department guide books and other similar explanatory material.	CM3	219	1	7	3.74	1.598

*The scores for these items were reversed to reflect the interpretation as indicated in this study.

c. Compliance Behaviour

Table 5.22 provides an overview of taxpayers' compliance based on the Theory of Planned Behaviour (TPB). The respondents were asked to express their opinion on a non-compliant hypothetical scenario relating to overstating business expenses of $2,500 in tax return forms. To interpret the data, higher mean values in intention, attitude and subjective norms indicate higher compliance. On the contrary, for perceived behavioural

control, higher mean values reflect higher control on non-compliance, which subsequently results in low compliance. Based on these interpretations, the results in Table 5.22 (both at indicator or construct level) demonstrate that the respondents were likely to comply with their tax obligations, except when the instrumental attitude was involved. This suggests that respondents might not comply with their tax obligations when cognitive considerations (whether beneficial or not) of complying with tax obligations are taken into consideration.

Table 5.22 Descriptive Statistics on Theory of Planned Behaviour Items New Zealand (Scenario 1)

Measures	Code	N	Min	Max	Mean	Std. Dev.
Intention	**IND**	219	1	7	5.83	1.363
I would claim the full deduction of $11,500, including the amount paid for my family trip.*	IND1R	219	1	7	5.82	1.667
I would not attempt to overstate the business expenses by $2,500.	IND2	219	1	7	5.74	1.761
I would only claim a deduction for the actual amount spent for business purposes.	IND3	219	1	7	5.98	1.473
Affective Attitude	**AFD**	219	1	7	5.61	1.425
I would be upset if I overstated the business expenses by $2,500.	AFD1	219	1	7	5.31	1.769
I would feel guilty if I overstated the business expenses by $2,500.	AFD2	219	1	7	5.67	1.631
I would feel pleased if I overstated the business expenses by $2,500.*	AFD3R	219	1	7	5.96	1.369
Instrumental attitude	**ISD**	219	1	7	3.43	1.235
The likelihood of being audited by the Inland Revenue Department is low. *	ISD1R	219	1	7	4.00	1.540
It would be financially beneficial for me to overstate the business expenses by $2,500.*	ISD2R	219	1	7	2.90	1.765
Subjective norms	**SND**	219	1	7	5.03	1.360
My family and peers would think that I should overstate the business expenses by $2,500.*	SND1R	219	1	7	4.84	1.801
My family and peers would think that I should only claim the actual business expenses.	SND2	219	1	7	5.26	1.631
My family and peers would approve of my decision to overstate the business expenses by $2,500.*	SND3R	219	1	7	5.15	1.603
My family and peers would not overstate the business expenses if faced with a similar situation.	SND4	219	1	7	4.95	1.635
Perceived behavioural control	**PBD**	219	1	7	3.15	1.314
With my tax knowledge, skills and resources, it would be very easy for me to overstate the business expenses by $2,500 successfully.	PBD1	219	1	7	3.40	1.790
Due to my limited tax knowledge, skills and resources, it is hard for me to overstate the business expenses by $2,500 successfully.*	PBD2R	219	1	7	3.62	1.812
I would successfully overstate the business expenses in my tax return form if I wanted to.	PBD3	219	1	7	3.16	1.819
With my tax knowledge, skills and resources, I would have no difficulty in overstating the business expenses by $2,500 successfully.	PBD4	219	1	7	3.10	1.742
There are no barriers that would prevent me from overstating the business expenses by $2,500 successfully.	PBD5	219	1	7	2.48	1.609

*The scores for these items were reversed to reflect the interpretation as indicated in this study.

Table 5.23 concerns another hypothetical tax compliance scenario relating to understating other income in tax return forms. Using a similar

interpretation of the mean values, the results generally reveal a comparable trend of compliance behaviour to the previous scenario. However, a closer examination suggests that the degree of compliance (based on the mean values), was moderately lower in this scenario. For instance, the mean values for the items measuring intention to comply were in the range of 4.64 to 4.74, compared to the mean values of closer to 6.0 in Scenario 1. Obviously, mean values of this construct also indicate the difference with 5.83 and 4.70 in Scenario 1 and 2, respectively. Similar trends were documented for the other constructs. Furthermore, for the perceived behavioural control, the mean values of the three items were slightly higher than 4.0, suggesting higher control over non-compliance, which in turn reduced compliance behaviour. The possible explanation for this situation was the nature of the scenarios. Scenario 1 deals with overstating business expenses, which might be more complicated for respondents to not comply, compared with omitting cash receipts, as set out in Scenario 2.

Table 5.23 Descriptive Statistics on Theory of Planned Behaviour Items New Zealand (Scenario 2)

Measures	Code	N	Min	Max	Mean	Std. Dev.
Intention	**INS**	219	1	7	4.70	1.748
I would report my income fully, including the amount of $10,500 from the sales of handicrafts.	INS1	219	1	7	4.64	2.066
I would not attempt to cheat by omitting to report the extra amount of $10,500 in my tax return form.	INS2	219	1	7	4.76	1.994
I would not declare the $10,500 because that amount arises from trading goods with friends and neighbours.*	INS3R	219	1	7	4.74	1.928
Affective Attitude	**AFS**	219	1	7	4.74	1.606
I would be upset if I did not declare the extra amount of $10,500.	AFS1	219	1	7	4.45	1.923
I would feel guilty if I did not declare that extra amount of $10,500.	AFS2	219	1	7	4.76	1.984
I would feel pleased if I did not declare the extra amount of $10,500.*	AFS3R	219	1	7	5.05	1.751
Instrumental attitude	**ISS**	219	1	7	3.16	1.334
The likelihood of being audited by the Inland Revenue Department is high.	ISS1	219	1	7	3.67	1.712
It would be financially beneficial for me not to declare the extra amount of $10,500.*	ISS2R	219	1	7	2.68	1.812
Subjective norms	**SNS**	219	1	7	4.36	1.422
My family and peers would think that I should not declare the extra $10,500.*	SNS1R	219	1	7	4.10	1.917
My family and peers would think that I should declare the extra $10,500.	SNS2	219	1	7	4.52	1.759
My family and peers would approve of my decision to understate my income by $10,500.*	SNS3R	219	1	7	4.53	1.770
My family and peers would not understate the income if faced with a similar situation.	SNS4	219	1	7	4.33	1.638
Perceived behavioural control	**PBS**	219	1	7	3.94	1.413
Due to my limited knowledge, skills and resources, it is hard for me to omit the $10,500 in my tax return form successfully.*	PBS1R	219	1	7	4.45	1.797
With my tax knowledge, skills and resources, it would be definitely easy for me to not declare the extra amount of $10,500 in my tax return form successfully.	PBS2	219	1	7	4.14	1.807
I would successfully omit the extra amount of $10,500 in my tax return form if I wanted to.	PBS3	219	1	7	4.04	1.863
With my tax knowledge, skills and resources, I would have no difficulty to omit the extra $10,500 in my tax return form successfully.	PBS4	219	1	7	3.89	1.779
There are no barriers that would prevent me from understating my income by $10,500 successfully.	PBS5	219	1	7	3.19	1.867

*The scores for these items were reversed to reflect the interpretation as indicated in this study.

5.3.2.2 Malaysia

a. Fairness Perceptions

Table 5.24 provides an overview of how Malaysian taxpayers (represented by salaried and wage earners) perceived the fairness of the current tax system. The mean values of each item suggested that respondents generally had positive perceptions of vertical fairness, personal fairness and administrative fairness. In other words respondents believed that the current tax system has treated individuals with different economic positions in a fair manner. In addition respondents were of the opinion that they are paying a reasonable amount of tax under the current tax system. For the other dimensions of fairness, the views on each item were mixed, but leaning towards positive perceptions. Observing the mean values of these constructs clearly indicate positive perceptions on all dimensions of fairness.

Table 5.24 Descriptive Statistics on Fairness Perceptions Malaysia

Measures	Code	N	Min	Max	Mean	Std. Dev.
General fairness	**GF**	852	1	7	4.23	0.968
I believe the government utilizes a reasonable amount of tax revenue to achieve social goals, such as the provision of benefits for low-income families.	GF1	852	1	7	4.34	1.460
I believe everyone pays their fair share of income tax under the current income tax system	GF2	852	1	7	4.66	1.394
I think the government spends too much tax revenue on unnecessary welfare assistance.*	GF3R	852	1	7	3.73	1.572
Exchange fairness	**EF**	852	1	7	4.42	0.849
I receive fair value from the government in return for my income tax paid (e.g. benefits).	EF1	852	1	7	4.34	1.361
It is fair that low-income earners receive more benefits from the government compared to high-income earners.	EF2	852	1	7	5.63	1.412
The income taxes that I have to pay are high considering the benefits I receive from the government.*	EF3R	852	1	7	3.33	1.373
Horizontal fairness	**HF**	852	1	7	4.03	1.450
It is fair for individuals with similar amounts of income to pay a similar amount of income tax.	HF1	852	1	7	3.85	1.993
I believe it is fair for me to pay a similar share of income tax compared with other taxpayers earning an equivalent amount of income.	HF2	852	1	7	4.21	1.737
It is fair that 'equals before tax are equals after tax'. For example, if a person earning MYR100,000 before tax pays MYR20,000 tax, everyone earning MYR100,000 income before tax should be left with MYR80,000 after tax.	HF3	852	1	7	4.12	1.611
Vertical fairness**	**VF**	852	1	7	5.16	0.965
It is fair that high-income earners are subject to tax at progressively higher tax rates than middle-income earners.	VF1	852	1	7	5.62	1.318
It is fair that middle-income earners are taxed at a lower rate than high-income earners.	VF2	852	1	7	5.80	1.291
The share of the total income taxes paid by high-income earners is much too high.*	VF3R	852	1	7	4.11	1.492
Retributive fairness	**RF**	852	1	7	4.60	0.920
It is fair that individuals who deliberately evade paying their taxes should be penalised with the same amount of penalty regardless of the amount of tax evaded.*	RF1R	852	1	7	3.86	1.876

To be fair, the degree of punishment for evading tax should depend on the degree of non-compliance.	RF2	852	1	7	5.41	1.330
I believe the initial late payment penalty on the unpaid tax, imposed on non-compliant taxpayers under the current tax system, is fair.	RF3	852	1	7	4.59	1.504
Personal fairness	**PF**	852	1	7	4.93	0.866
I believe that I pay my fair share of the tax burden under the current income tax system.	PF1	852	1	7	5.39	1.337
Compared to other taxpayers, I pay more than my fair share of income tax.*	PF2R	852	1	7	4.08	1.464
Middle-income earners pay their fair share of income tax.	PF3	852	1	7	5.35	1.288
Administrative fairness	**AF**	852	1	7	4.62	1.053
There are a number of ways available to me to correct errors in the calculation of my tax liability, if necessary, at no additional cost.	AF1	852	1	7	4.71	1.279
The administration of the income tax system by the Inland Revenue Board is consistent across years and taxpayers.	AF2	852	1	7	4.58	1.392

* The scores for these items were reversed to reflect the interpretation as indicated in this study.

**There are slight differences in items VF1 and VF2 between New Zealand and Malaysian counterpart. In Malaysia, the term 'middle-income' is used (instead of 'low-income' as in New Zealand), since low-income earners are not subject to tax in Malaysia.

b. Tax Knowledge and Tax Complexity

Descriptive statistics with regard to perceptions of taxpayers' tax knowledge and complexity of the tax system (as in Table 5.25), suggest that respondents generally perceived themselves as having good knowledge of tax except in two knowledge indicators, which had low mean values. In relation to complexity of the tax system, the majority of the content complexity items had mean values of below 4.0, indicating that respondents perceived the content of the income tax system as complex. However, observing these items as one construct (content complexity), with a mean value of 4.06, showed slightly improved perceptions. Despite

these perceptions, they felt that it was relatively less complex to comply with the income tax system.

Table 5.25 Descriptive Statistics on Tax Knowledge and Tax Complexity Malaysia

Measures	Code	N	Min	Max	Mean	Std. Dev.
General knowledge	**GK**	852	1	7	4.47	1.101
The income tax system is a legitimate way for the government to collect revenue to manage an economy.	GK1	852	1	7	5.58	1.224
To my knowledge, individuals are subject to a single flat rate of income tax under the current tax system.*	GK2R	852	1	7	3.60	1.566
Legal knowledge	**LK**	852	1	7	4.99	1.077
As far as I am aware, non-compliant taxpayers can be imprisoned, if found guilty of evading tax.	LK1	852	1	7	4.67	1.594
Similar to other criminal offences, I believe that individuals can also be prosecuted for not complying with the Income Tax Act.	LK2	852	1	7	5.30	1.347
I believe that I do not have to abide by the deadline for the submission of tax return form (s) as the deadline is only a guideline and does not result in penalties.*	LK3R	852	1	7	5.03	1.715
Technical knowledge	**TK**	852	1	7	4.54	0.886
As far as I am aware, everyone who earns income sourced in this country needs to register with the Inland Revenue Board, regardless of whether that person is resident or not.	TK1**	852	1	7	5.48	1.281
I am sure that I am not required to file a tax return on interest income that I earn from money deposited in a bank account in Malaysia as it will be subject to income tax at source.	TK2	852	1	7	4.77	1.621
To my knowledge, I can deduct all personal expenses in calculating my tax liability.*	TK3R	852	1	7	4.01	1.819
I have little idea about the deductions that I can claim as a taxpayer in the computation of my tax liability.*	TK4R	852	1	7	3.98	1.629
Content complexity	**CT**	852	1	7	4.06	1.127
I think the term used in tax publications (eg. IRB guide books) and in tax return forms are difficult for people like me to understand.*	CT1R	852	1	7	3.89	1.491
The sentences and wording in the Individual Income Tax Return Guide are lengthy and not user-friendly.*	CT2R	852	1	7	3.76	1.468
The rules related to individual income tax are clear.	CT3	852	1	7	4.73	1.266

Most of the time I need to refer to others for assistance in dealing with tax matters.*	CT4R	852	1	7	3.97	1.733
Compliance complexity	**CM**	852	1	7	4.25	1.124
I do not have a problem with completing and filing the tax return form(s).	CM1	852	1	7	4.84	1.487
I find it tedious to maintain all my relevant records for the whole year for tax purposes.*	CM2R	852	1	7	3.42	1.614
I do not have to make a lot of effort to understand the explanations given in Inland Revenue Board guide books and other similar explanatory material.	CM3	852	1	7	4.53	1.448

*The scores for these items were reversed to reflect the interpretation as indicated in this study.
**There is slight difference in item TK1 between New Zealand and Malaysian counterpart. The change was made to Malaysian scenario to accommodate the differences between the two environments.

c. Compliance Behaviour

Similar hypothetical scenarios to those used in the New Zealand survey were used in a Malaysian context. The results on Scenario 1 (Table 5.26) reveal a comparable outcome to New Zealand, where Malaysian respondents also had good intention to comply, high mean values for affective attitude and subjective norms, but low mean values for instrumental attitude. In relative terms, the values were slightly lower for Malaysia than the reported mean values for New Zealand, which suggests a lower degree of compliance in Malaysia. Other than that, the perceived behavioural control of slightly above 4.0 also reflects that Malaysian respondents have less difficulty in avoiding tax, thus resulting in low compliance.

Table 5.26 Descriptive Statistics on Theory of Planned Behaviour Items Malaysia (Scenario 1)

Measures	Code	N	Min	Max	Mean	Std. Dev.
Intention	**IND**	852	1	7	4.67	1.293
I would claim the full deduction of MYR11,500, including the amount paid for my family trip.*	IND1R	852	1	7	4.23	1.771
I would not attempt to overstate the business expenses by MYR2,500.	IND2	852	1	7	4.72	1.657
I would only claim a deduction for the actual amount spent for business purposes.	IND3	852	1	7	5.12	1.439
Affective Attitude	**AFD**	852	1	7	4.66	1.265
I would be upset if I overstated the business expenses by MYR2,500.	AFD1	852	1	7	4.82	1.580
I would feel guilty if I overstated the business expenses by MYR2,500.	AFD2	852	1	7	4.94	1.530
I would feel pleased if I overstated the business expenses by MYR2,500.*	AFD3R	852	1	7	4.28	1.689
Instrumental attitude	**ISD**	852	1	7	3.85	1.203
The likelihood of being audited by the Inland Revenue Department is low.*	ISD1R	852	1	7	3.89	1.444
It would be financially beneficial for me to overstate the business expenses by MYR2,500.*	ISD2R	852	1	7	3.81	1.550
Subjective norms	**SND**	852	1	7	4.30	1.038
My family and peers would think that I should overstate the business expenses by MYR2,500.*	SND1R	852	1	7	4.09	1.632
My family and peers would think that I should only claim the actual business expenses.	SND2	852	1	7	4.71	1.487
My family and peers would approve of my decision to overstate the business expenses by MYR2,500.*	SND3R	852	1	7	4.14	1.539
My family and peers would not overstate the business expenses if faced with a similar situation.	SND4	852	1	7	4.30	1.422
Perceived behavioural control	**PBD**	852	1	7	4.15	1.091
With my tax knowledge, skills and resources, it would be very easy for me to overstate the business expenses by MYR2,500 successfully.	PBD1	852	1	7	4.03	1.563
Due to my limited tax knowledge, skills and resources, it is hard for me to overstate the business expenses by MYR2,500 successfully.*	PBD2R	852	1	7	3.90	1.482
I would successfully overstate the business expenses in my tax return form if I wanted to.	PBD3	852	1	7	4.44	1.524
With my tax knowledge, skills and resources, I would have no difficulty in overstating the business expenses by MYR2,500 successfully.	PBD4	852	1	7	4.26	1.561
There are no barriers that would prevent me from overstating the business expenses by MYR2,500 successfully.	PBD5	852	1	7	4.15	1.568

*The scores for these items were reversed to reflect the interpretation as indicated in this study.

Table 5.27 sets out the descriptive statistics on taxpayers' behaviour in 'understating other income' scenario. Interestingly, the results were dissimilar to the previous scenario, particularly on subjective norms, where respondents were found to be less likely to comply. There are two possible explanations for such diverse results. First, the large amount (MYR10,500) used in this scenario, compared to the MYR2,500 in Scenario 1.[90] Second, the scenario involved a salaried person with extra income, which is more relevant to the respondents.[91] These factors did not seem to be important in New Zealand probably because the New Zealand respondents are not solely salaried individuals.

[90] Even though different amounts were also used in New Zealand scenarios, they did not produce significant changes in the New Zealand results.

[91] In Malaysia, the respondents are all salaried persons.

Table 5.27 Descriptive Statistics on Theory of Planned Behaviour Items Malaysia (Scenario 2)

Measures	Code	N	Min	Max	Mean	Std. Dev.
Intention	**INS**	852	1	7	4.23	1.342
I would report my income fully, including the amount of MYR10,500 from the sales of handicrafts.	INS1	852	1	7	4.17	1.701
I would not attempt to cheat by omitting to report the extra amount of MYR10,500 in my tax return form.	INS2	852	1	7	4.63	1.481
I would not declare the MYR10,500 because that amount arises from trading goods with friends and neighbours.*	INS3R	852	1	7	3.91	1.700
Affective Attitude	**AFS**	852	1	7	4.23	1.362
I would be upset if I did not declare the extra amount of MYR10,500.	AFS1	852	1	7	4.29	1.636
I would feel guilty if I did not declare that extra amount of MYR10,500.	AFS2	852	1	7	4.30	1.644
I would feel pleased if I did not declare the extra amount of MYR10,500.*	AFS3R	852	1	7	4.12	1.585
Instrumental attitude	**ISS**	852	1	7	3.80	1.184
The likelihood of being audited by the Inland Revenue Department is high.	ISS1	852	1	7	4.13	1.539
It would be financially beneficial for me not to declare the extra amount of MYR10,500.*	ISS2R	852	1	7	3.50	1.540
Subjective norms	**SNS**	852	1	7	3.91	1.231
My family and peers would think that I should not declare the extra MYR10,500.*	SNS1R	852	1	7	3.85	1.645
My family and peers would think that I should declare the extra MYR10,500.	SNS2	852	1	7	4.28	1.536
My family and peers would approve of my decision to understate my income by MYR10,500.*	SNS3R	852	1	7	3.73	1.471
My family and peers would not declare the extra MYR10,500 if faced with a similar situation.*	SNS4R	852	1	7	3.82	1.483
Perceived behavioural control	**PBS**	852	1	7	4.17	1.070
Due to my limited knowledge, skills and resources, it is hard for me to omit the MYR10,500 in my tax return form successfully.*	PBS1R	852	1	7	4.02	1.474
With my tax knowledge, skills and resources, it would be definitely easy for me to not declare the extra amount of MYR10,500 in my tax return form successfully.	PBS2	852	1	7	4.13	1.482
I would successfully omit the extra amount of MYR10,500 in my tax return form if I wanted to.	PBS3	852	1	7	4.36	1.560
With my tax knowledge, skills and resources, I would have no difficulty to omit the extra MYR10,500 in my tax return form successfully.	PBS4	852	1	7	4.23	1.518
There are no barriers that would prevent me from understating my income by MYR10,500 successfully.	PBS5	852	1	7	4.20	1.521

*The scores for these items were reversed to reflect the interpretation as indicated in this study.

5.3.3 *t*-test Analysis

Descriptive analysis on taxpayers' perceptions in New Zealand and Malaysia reveal their differing opinions on the issues of fairness, tax knowledge, tax complexity and compliance behaviour. To determine whether these differences are significant or not, a *t*-test analysis was subsequently performed using the SPSS. Performing this analysis enables the researcher to test Preliminary Hypotheses 1 to 4 (4a and 4b), which subsequently answers the first four research questions in this study.[92] A summary of the results of the analysis is set out in Tables 5.28 to 5.31 (see Appendix 12 for the full results). While these results are interpreted based on the analysis performed, it is also important to highlight that the results may be influenced by the different tax jurisdictions under study and the samples involved. In New Zealand, various groups of individual taxpayers were selected while in Malaysia the focus was on salaried and wage earners. Also, the comparison was made on the basis of respondents' perceptions on their own income tax systems. Having said that, the term 'taxpayers' used in this study should be interpreted with care as it actually

[92] A *t*-test analysis was also performed in Malaysia to investigate whether any significant difference exists in relation to taxpayers' views on fairness perceptions, tax knowledge, tax complexity and compliance behaviour between those working in government and private sector. The results reveal that taxpayers in the government sector generally have better perceptions on the income tax system, but the differences appear to be significant in terms of general fairness, exchange fairness, vertical fairness and personal fairness. Results also suggest that taxpayers in the government sector have better knowledge on the legal aspects of the income tax system. They also appear to have more positive attitudes towards compliance compared to those in private sector. The full results of the analysis are available in Appendix 11.

denotes the relevant sample in the country under study and not the broader population of taxpayers.

5.3.3.1 Fairness Perceptions

Table 5.28 compares the mean values of fairness perceptions between New Zealand and Malaysian taxpayers, together with the corresponding two-tailed *p*-values to determine whether or not taxpayers' perceptions differ significantly. The *p*-values column shows values of less than 0.01 for all dimensions of fairness, with the exception of retributive fairness. Based on these statistics, the null form of Hypothesis 1, which states that '*There is no significant difference in fairness perceptions between New Zealand and Malaysian taxpayers of their current income tax systems'* can therefore be rejected at the 1 percent significance level. In other words, the results suggest that fairness perceptions of New Zealand and Malaysian taxpayers are significantly different. The only fairness dimension that taxpayers in both New Zealand and Malaysia had similar perceptions was retributive fairness.

Apart from providing evidence of significant difference in six dimensions of fairness perceptions between the New Zealand and Malaysian taxpayers, the mean values further suggest that Malaysian taxpayers have better fairness perceptions on the income tax system than the New Zealanders.

New Zealand taxpayers only have better perceptions than Malaysian taxpayers in terms of horizontal fairness.

Table 5.28 Comparison between New Zealand and Malaysian Taxpayers on Fairness Perceptions

Measures	N		Mean		*p*-value (two-tailed)
	New Zealand	Malaysia	New Zealand	Malaysia	
General fairness	219	852	3.60	4.23	.000
Exchange fairness	219	852	3.65	4.42	.000
Horizontal fairness	219	852	5.39	4.03	.000
Vertical fairness	219	852	4.38	5.16	.000
Retributive fairness	219	852	4.58	4.60	.716
Personal fairness	219	852	4.71	4.93	.005
Administrative fairness	219	852	3.86	4.62	.000

5.3.3.2 Tax Knowledge and Tax Complexity

Table 5.29 provides the summary of *t*-test results on New Zealand and Malaysian taxpayers' perceptions of tax knowledge and tax complexity to test the null form of Hypotheses 2 and 3. Based on the *p*-values of less than 0.01, Hypothesis 2 can be rejected at the 1 percent significance level. In other words, Hypothesis 2 that states *'There is no significant difference in the levels of knowledge between New Zealand and Malaysian taxpayers of their current income tax systems'* is not true. This suggests that taxpayers in New Zealand and Malaysia have significantly different levels of tax knowledge. In addition to this, mean values indicate that New Zealand taxpayers are relatively more knowledgeable than their Malaysian counterparts.

Hypothesis 3 tests whether there is no significant difference in the levels of perceptions of the complexity between New Zealand and Malaysian taxpayers of their current income tax system. The results in Table 5.29 suggest that this hypothesis that states *'There is no significant difference in the levels of perceptions of the complexity between New Zealand and Malaysian taxpayers of their current income tax systems'* is only true in the case of compliance complexity. However, respondents' perceptions do differ significantly in terms of content complexity. In particular, the *p*-values indicate that taxpayers' perceptions on content complexity are significantly different at the 5 percent significance level. From the mean values, it appeared that in both dimensions, New Zealand taxpayers perceived the income tax system being more complex compared to Malaysian taxpayers.

Table 5.29 Comparison between New Zealand and Malaysian Taxpayers on Tax Knowledge and Tax Complexity

Measures	N		Mean		*p*-value (two-tailed)
	New Zealand	Malaysia	New Zealand	Malaysia	
General knowledge	219	852	5.71	4.47	.000
Legal knowledge	219	852	5.62	4.99	.000
Technical knowledge	219	852	4.77	4.54	.001
Content complexity	219	852	3.85	4.06	.019
Compliance complexity	219	852	4.12	4.25	.142

5.3.3.3 Compliance Behaviour

Tables 5.30 and 5.31 present mean values and corresponding *p*-values of New Zealand and Malaysian taxpayers' compliance behaviour to test Hypotheses 4a and 4b. Hypotheses 4a and 4b infer whether taxpayers in

both New Zealand and Malaysia have the same levels of perceptions in relation to TPB elements, namely intention to comply, affective attitude, instrumental attitude, subjective norms and perceived behavioural control in the two scenarios investigated. The *p*-values of less than 0.01 in Table 5.30 suggest that taxpayers' perceptions are significantly different for all TPB elements in the 'overstating business expense' scenario. The results provide no support to Hypothesis 4a which states that '*There is no significant difference in the levels of intention to comply, affective attitude, instrumental attitude, subjective norms and perceived behavioural control, between New Zealand and Malaysian taxpayers, in the overstating business expenses scenario.'* In addition to this, mean values of the groups generally indicate more compliance of New Zealand taxpayers compared to Malaysian taxpayers.

Table 5.30 Comparison between New Zealand and Malaysian Taxpayers on Compliance Behaviour (Scenario 1)

Measures	**N**		**Mean**		***p*-value**
	New Zealand	**Malaysia**	**New Zealand**	**Malaysia**	**(two-tailed)**
Intention to comply	219	852	5.83	4.67	.000
Affective attitude	219	852	5.61	4.66	.000
Instrumental attitude	219	852	3.43	3.85	.000
Subjective norms	219	852	5.03	4.30	.000
Perceived behavioural control	219	852	3.15	4.15	.000

Comparable to Scenario 1, the *p*-values of lower than 0.01 for TPB elements (with the exception of perceived behavioural control, which is higher than 0.01 but less than 0.05) in Table 5.31 also indicates significantly different perceptions between New Zealand and Malaysian

taxpayers. The results suggest the rejection of Hypothesis 4b, which states that '*There is no significant difference in the levels of intention to comply, affective attitude, instrumental attitude, subjective norms and perceived behavioural control, between New Zealand and Malaysian taxpayers, in the understating other incomes scenario.'* In addition to this, Table 5.31 shows favourable mean values of New Zealand sample as compared to their Malaysian counterparts, indicating higher compliance among New Zealand taxpayers.

Table 5.31 Comparison between New Zealand and Malaysian Taxpayers on Compliance Behaviour (Scenario 2)

Measures	**N**		**Mean**		***p*-value (two-tailed)**
	New Zealand	**Malaysia**	**New Zealand**	**Malaysia**	
Intention to comply	219	852	4.70	4.23	.000
Affective attitude	219	852	4.74	4.23	.000
Instrumental attitude	219	852	3.16	3.80	.000
Subjective norms	219	852	4.36	3.91	.000
Perceived behavioural control	219	852	3.94	4.17	.024

Overall, the *t*-test analysis revealed interesting findings with regard to the taxpayers' perceptions in the two countries. This analysis actually answers the first four research questions (refer Table 5.32) in this study; that is, whether taxpayers in both countries had the same perceptions in terms of fairness, knowledge and complexity of the income tax system as well as their compliance behaviour.

Table 5.32 Summary of Results of Preliminary Hypotheses Testing

Research Question	Research Hypotheses	Results	
		New Zealand	**Malaysia**
1. Do taxpayers in both New Zealand and Malaysia have the same levels of fairness perceptions of their current income tax systems?	**Hypothesis 1:** There is no significant difference in fairness perceptions between New Zealand and Malaysian taxpayers of their current income tax systems.	Reject	Reject
2. Do taxpayers in both New Zealand and Malaysia have the same levels of tax knowledge of their current income tax systems?	**Hypothesis 2:** There is no significant difference in the levels of knowledge between New Zealand and Malaysian taxpayers of their current income tax systems.	Reject	Reject
3. Do taxpayers in both New Zealand and Malaysia have the same levels of perceptions of the complexity of their current income tax systems?	**Hypothesis 3:** There is no significant difference in the levels of perceptions of the complexity between New Zealand and Malaysian taxpayers of their current income tax systems.	Accept in the case of compliance complexity. Reject in the case of content complexity	Accept in the case of compliance complexity. Reject in the case of content complexity
4. Do taxpayers in both New Zealand and Malaysia have the same levels of perceptions in relation to the TPB elements?	**Hypothesis 4a:** There is no significant difference in the levels of intention to comply, affective attitude, instrumental attitude, subjective norms and perceived behavioural control, between New Zealand and Malaysian taxpayers, in the 'overstating business expenses' scenario.	Reject	Reject

	Hypothesis 4b: There is no significant difference in the levels of intention to comply, affective attitude, instrumental attitude, subjective norms and perceived behavioural control, between New Zealand and Malaysian taxpayers, in the 'understating other incomes' scenario.	Reject	Reject

The findings on fairness perceptions generally suggest that Malaysian taxpayers had significantly better perceptions on the current income tax system compared to New Zealand taxpayers, except in the case of retributive fairness. Specifically, Malaysian taxpayers unanimously agreed that the current tax system had achieved all dimensions of fairness. In terms of ranking, vertical fairness, personal fairness and administrative fairness are the fairness dimensions that taxpayers seemed to be most happy with. Unlike Malaysia, in New Zealand, taxpayers believed that horizontal fairness was the fairness dimension that is highly maintained under the current income tax system. In addition to this, negative perceptions were provided on general fairness, exchange fairness and the administration of the income tax system.

With regard to tax knowledge, taxpayers in both countries claimed that they had good knowledge of the current income tax system implemented in their countries, but at different levels. In fact, results further suggest that New Zealand taxpayers are more knowledgeable than Malaysian

taxpayers. Nevertheless, New Zealand taxpayers still consider the tax system as complex. The results give an impression of high complexity of the tax system as those with good knowledge of taxation still view the system as complex. Similar trends were observed in Malaysia but to a lower level.

In terms of the elements of the TPB, taxpayers in the two countries demonstrated their willingness to comply with the system, with greater compliance displayed among New Zealand taxpayers. Interestingly, notwithstanding the better fairness perceptions among Malaysian taxpayers compared to New Zealand taxpayers, the New Zealand taxpayers seemed to have greater compliance. The possible explanation for this situation is the differing level of tax knowledge, tax complexity and the elements of TPB (attitudes, subjective norms and perceived behavioural control) between the two groups. Such possibilities, however, can only be explained after performing the regression analysis (to be discussed in Chapter 6) and the in-depth interviews (to be discussed in Chapters 7 and 8).

5.3.4 Qualitative Comments from Respondents

In the survey, the respondents were given the opportunity to express their opinions relating to their perceptions on tax fairness, tax knowledge, tax complexity and compliance behaviour in the open-ended questions. The comments given were analysed using content analysis.

5.3.4.1 New Zealand

a. Fairness Perceptions

Figure 5.1 exhibits taxpayers' perceptions with regard to fairness. Comments revealed that most respondents perceived the tax system as unfair and very few considered the tax system to be fair. To understand further their frustrations towards the income tax system, respondents' opinions were classified into the seven dimensions of fairness, as defined in this study.

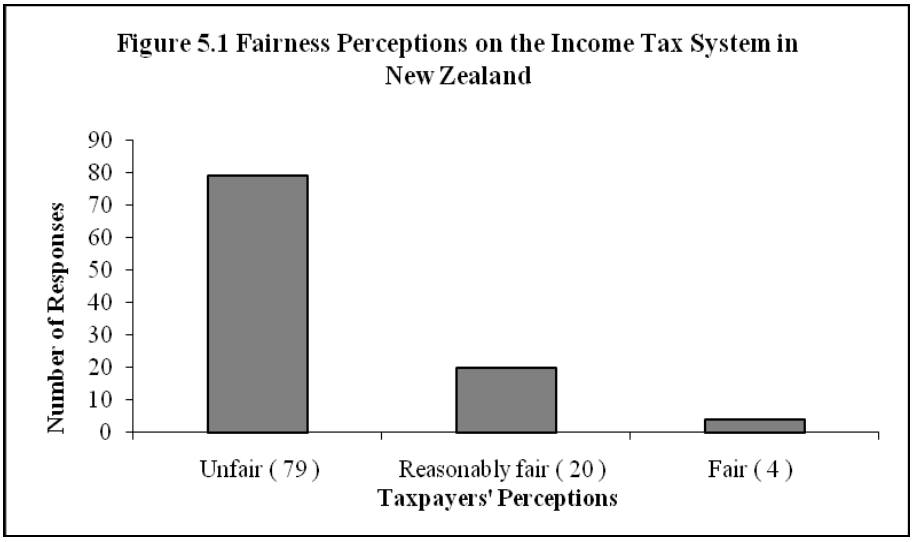


Figure 5.2 shows that general fairness, vertical fairness and personal fairness were the three main issues of concern. With regard to general fairness, respondents had complaints about the high tax rates and government spending of tax revenues. Graduated tax rates and the feeling that the taxes on high-income earners are not enough, indicate negative perceptions of vertical fairness. In relation to personal fairness,

respondents, regardless of their economic position, personally felt that the current tax system is overburdened and in need of improvement. Interestingly, there is no objection against horizontal fairness, indicating taxpayers' belief that the current tax system fairly treats taxpayers in similar economic positions. While some respondents simply perceive the tax system as unfair, others view the unfairness of the tax system in various ways, as illustrated below:

"[Tax is] not fair, [it] should look at family income, not just individuals".

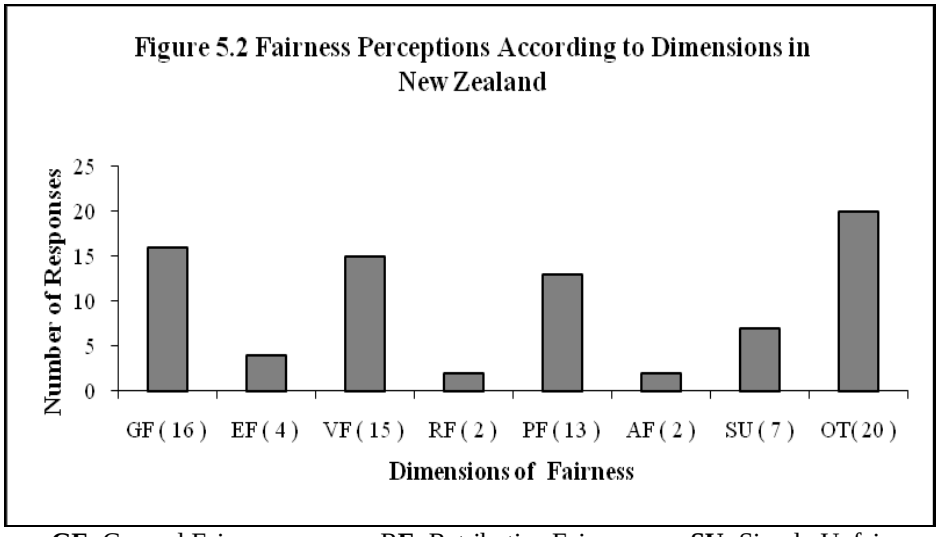
"I don't agree with taxing for beneficiaries who earn small amounts; e.g. delivering junk mail for $70-$80 per month. I'd like to see up [to] $100 be tax free".

"I don't think the current tax is fair to all. I would like to have a system where no one is taxed; e.g. PAYE (Pay As You Earn), withholding etc., but all tax is collected on purchases, i.e. the more we spend the more we pay".

"IRD (Inland Revenue Department) seems to always load the employer".

"The worse thing about the tax system is the ability of self-employed people to reduce their personal income, to allow their children to receive

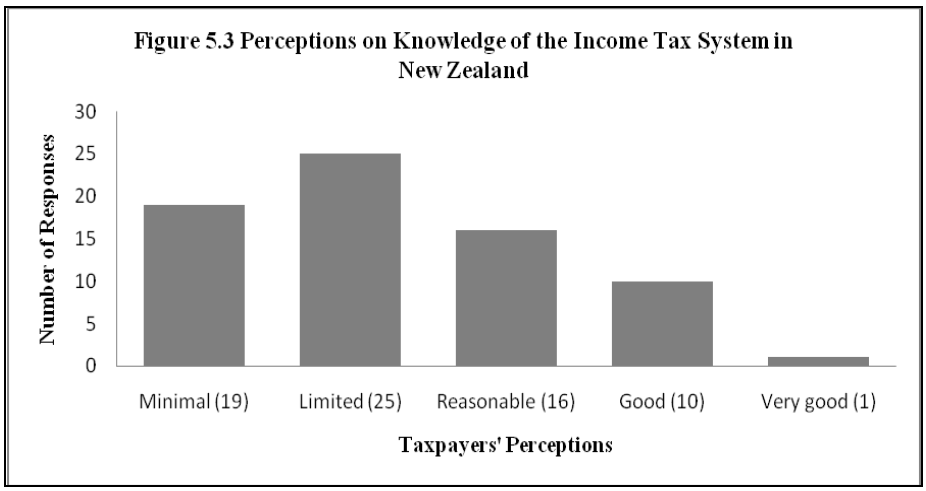
student allowances. Often, generally their personal earnings is much higher than wage or salary earners whose children are denied support".



GF=General Fairness R**F**=Retributive Fairness **SU**=Simply Unfair
EF=Exchange Fairness P**F**=Personal Fairness **OT**=Others
VF=Vertical Fairness AF=Administrative Fairness

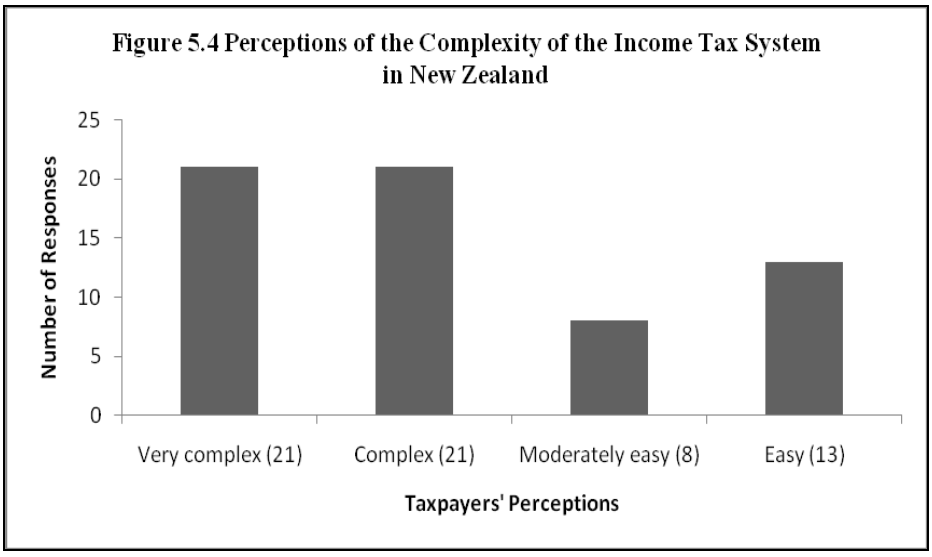
b. Tax Knowledge

Figure 5.3 reveals taxpayers' perceptions of their knowledge of the current tax system. The majority of respondents described their knowledge as either minimal or limited, which forced some of them to hire tax accountants. Only a few (including former IRD staff) considered themselves as having a good or very good knowledge of tax.



c. Tax Complexity

The comments on the complexity of the income tax system, as illustrated in Figure 5.4, suggest that respondents generally viewed the tax system as complex. Only a small number considered the tax system as uncomplicated. Such claims, however, were expressed by wage and salary earners who pay their taxes through the PAYE system and may not file tax returns.



d. Compliance Behaviour

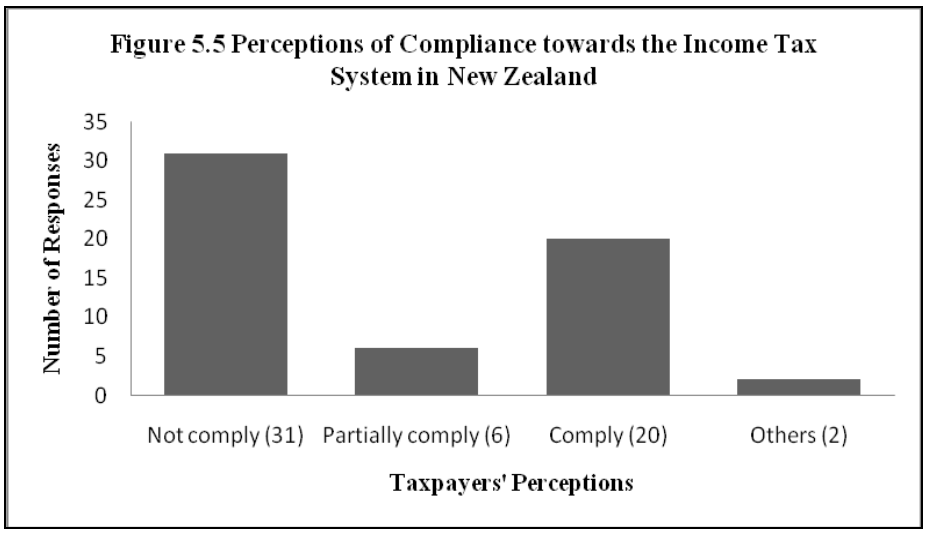
Figure 5.5 demonstrates taxpayers' opinion regarding tax compliance behaviour. Respondents generally felt that most people did not comply with their tax obligations while some only complied to a certain degree. They further suggested that government spending and high tax rates are among the contributing factors to non-compliance behaviours, as noted below:

"If the government did not waste so much money lurking around,
I wouldn't resent to pay".

"…higher tax rates discourage this [compliance]".

"If everyone thought tax was a flat, simpler fair rate, they would spend less time trying to avoid it"

While there were respondents who believed that most people complied with their tax obligations, some of them holding this view were those who received wages or salaries and thus could not avoid or evade tax.

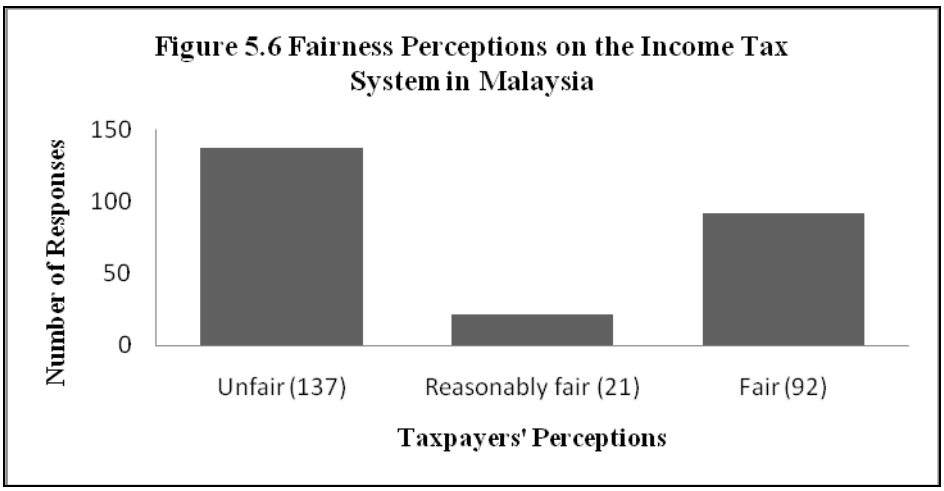


5.3.4.2 Malaysia

Comments from the Malaysian respondents revealed that the patterns are somewhat dissimilar to their New Zealand counterpart. Such a difference is expected, as a result of cultural differences, and also the different sample groups under study. The New Zealand sample includes people with various sources of income while the Malaysian sample only focused on salaried individuals.

a. Fairness Perceptions

Figure 5.6 on fairness perceptions reveals that while a majority described the tax system as unfair, a number of taxpayers viewed the system as fair. This situation differs from New Zealand, with only a few having positive fairness perceptions of the tax system.



When splitting the comments into the seven dimensions of fairness, as set out in Figure 5.7, it appears that Malaysian respondents were more concerned with vertical fairness, retributive fairness, general fairness and administrative fairness. Respondents particularly had complaints about the graduated tax rates and insufficient taxes on the high-income earners, implying vertical unfairness. They were also not happy with the enforcement action undertaken by the Inland Revenue Board. Respondents considered the mechanisms as too loose and not effective in curbing non-compliant behaviour. This feeling of dissatisfaction led to the negative perceptions of retributive fairness. Government spending of tax revenues was the core issue raised, implying negative perceptions of general fairness. In fact, the respondents blamed the government's inefficient spending as the catalyst for the non-compliance behaviour. To quote some of their comments:

"…distribution of tax revenue is not consistent".

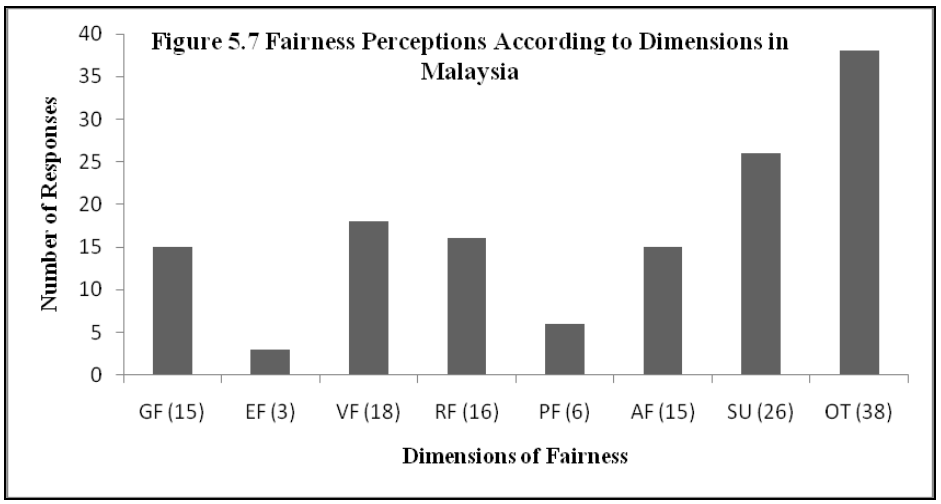
"Government should be transparent with their spending".

"Taxes are collected, citizens welfare are neglected".

"The non-transparency of the government [spending] leads taxpayers to avoid tax and they want their rights to be fulfilled".

"The IRB is not transparent, makes people not paying tax".

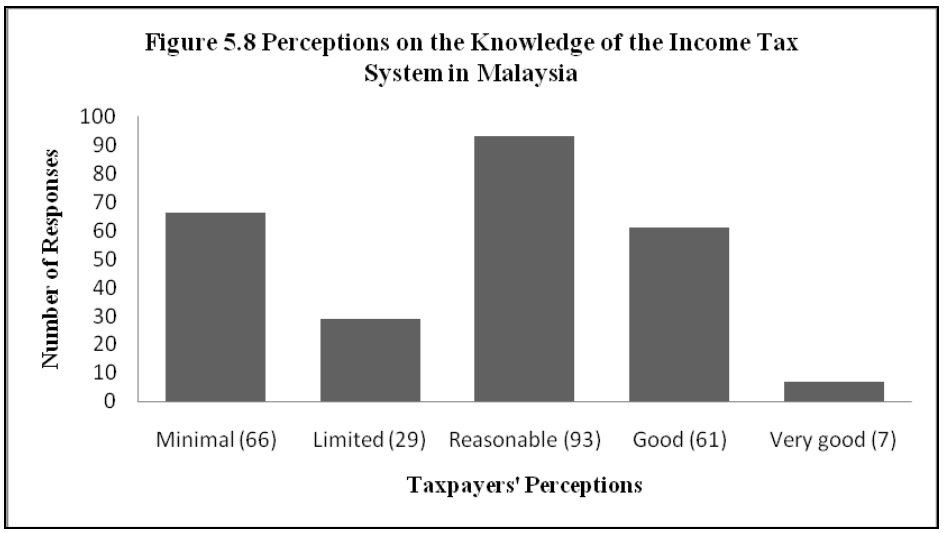
Taxpayers under study also had a lack of confidence in the Inland Revenue Board's administration system. The inconsistent advice among tax officers, ambiguity with tax amounts and late refunds were their main concerns. Like New Zealand, there is no objection to horizontal fairness. Apart from the above issues, there were taxpayers who simply perceived the tax system as unfair; while others viewed the unfairness of the tax system in various aspects, including replacing the tax system with an Islamic tax system for the Muslims, taking into account the inflation factor in revising the tax system, etc.



GF=General Fairness **RF**=Retributive Fairness **SU**=Simply Unfair
EF=Exchange Fairness **PF**=Personal Fairness **OT**=Others
VF=Vertical Fairness **AF**=Administrative Fairness

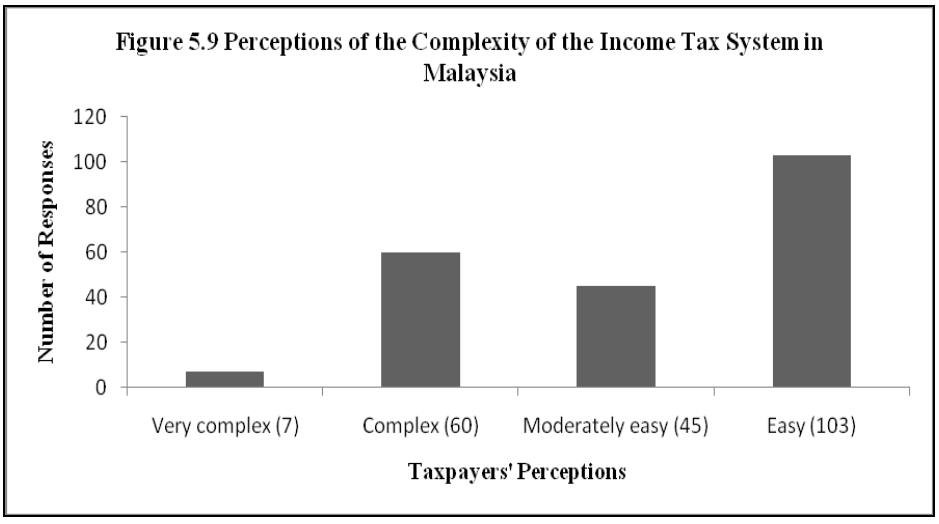
b. Tax Knowledge

Figure 5.8 provides taxpayers' perceptions of their knowledge of the current tax system, the results of which are contrary to New Zealand. The majority of taxpayers under study considered themselves as having a reasonable to good knowledge of tax, even though quite a number admitted to have either "minimal" or "limited" knowledge. The difference could be because the Malaysian respondents are salaried taxpayers who completed more simplified tax return forms.



c. Tax Complexity

Parallel with their perceptions on knowledge of the income tax system, respondents generally viewed the tax system as not being complex. Only a small number considered the tax system as extremely complicated (refer to Figure 5.9). Again these comments represent the views of salaried taxpayers.



d. Compliance Behaviour

Figure 5.10 suggests that respondents were compliant in Malaysia. However, the claim is correct for salaried taxpayers who have little or no choice in the decision to avoid or evade tax. In fact they believed that everyone has a temptation to avoid tax if there is opportunity to do so. While such opportunities are widely available to business people, less enforcement further escalates such illegal acts, as noted below:

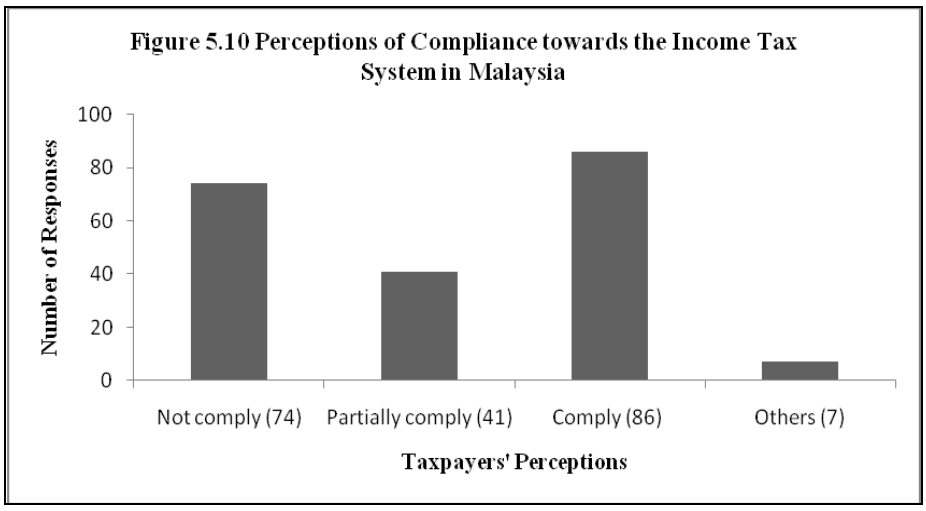
"If possible, everyone including leaders and policy makers doesn't want to pay taxes. Many businesspersons avoid taxes. Salaried people have to pay taxes because they have the pay slips".

"Many avoid taxes".

"Try to avoid if there's chance".

"[Compliance is] very low".

"Less enforcement and no commitment"



Overall, the qualitative comments are consistent, to a substantial degree, with the descriptive analysis in the earlier section. Some discrepancies, however, are expected (especially in Malaysia), since less than 30 percent of the respondents offered any comments.

5.4 Summary

In this chapter, the exploratory analysis of the survey data was performed, which involves response analysis, preliminary analysis and *t*-test analysis. From the analysis, the findings suggest that taxpayers under study may have different perceptions on each dimension of fairness, which in the end assist in formulating their judgments on the fairness of the income tax system as a whole. For example, New Zealand respondents viewed the income tax system as reasonably fair in terms of horizontal fairness, personal fairness and retributive fairness, but at the same time, presented

their criticisms on administrative fairness, exchange fairness and general fairness of the income tax system. A similar conclusion is applicable to Malaysia, where respondents have different perceptions of various dimensions of fairness. This information is useful for any changes that may be made to the income tax systems in the future.

When comparing the two environments under study in the *t*-test analysis, the results suggest that Malaysian respondents have better fairness perceptions of the current tax system compared to the New Zealand sample. In relation to knowledge, however, New Zealand respondents are in a better position. Interestingly, in terms of complexity of the tax system, New Zealand sample viewed the tax system as more complex relative to Malaysian respondents. In other words, the results imply that the New Zealand income tax system is perceived as very complex, such that even those with a good level of knowledge still could not comprehend it. Notwithstanding their criticisms of the fairness and the complexity of the income tax system, New Zealand respondents still had greater levels of compliance compared to the Malaysian sample. At this point, the findings indicate that fairness perceptions and complexity of the income system may not greatly affect taxpayers' decisions (in both countries) towards compliance. To further explain this, regression analysis using PLS was performed and is discussed in the next chapter.

Chapter 6

Regression Analysis and Results of Survey Data

6.1 Introduction

This chapter extends the exploratory analysis of the survey data in Chapter 5 with reference to the extended compliance behaviour model discussed in Chapter 4 on methodology. Prior to the analysis, examination of data from the model is presented. This is followed by a discussion on the evaluation of measurement model. Finally, the primary hypotheses are analysed with reference to the structural model developed in Chapter 3.

6.2 Data Examination

This study developed two behavioural models using two tax compliance scenarios. Seventy indicators measuring 22 variables were initially used, where each model consists of six exogenous variables (subjective norms, three dimensions of tax knowledge and two dimensions of tax complexity), and 11 endogenous variables (seven dimensions of fairness, intention to comply, perceived behavioural control and two dimensions of attitudes).[93] Of these variables, six are formative constructs (with 18 items) and 16 are reflective constructs (with 52 items). While formative constructs do not measure the same underlying phenomenon and do not expect to correlate,

reflective constructs are latent variables that measure "the same underlying phenomenon" (Chin, 1998b, p. 305). It is vital to distinguish these two types of constructs because they require different methods in evaluating the measurement model.[94] The following section describes the relevant tests performed to evaluate the measurement model according to the nature of the constructs.

6.3 Evaluation of the Measurement Model – First Order Factor Model

The aim of evaluating the measurement model is to address the validity and reliability of the indicators in measuring latent variables. While validity is concerned with whether appropriate measures were used to reflect the specific concept (Dibbern & Chin, 2005; Pallant, 2005), reliability on the other hand refers to the accuracy of the actual measuring instrument. To confirm the validity and reliability of the measures, it is vital, in a comparative study, to ascertain whether the measures are valid and reliable in both environments. In other words, this study requires the researcher to evaluate the measurement model simultaneously to establish that the measures perform adequately in both data samples. To achieve this outcome, the results of measurement analysis were compared.

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[93] The same measures on fairness perceptions, tax knowledge and tax complexity were used in both scenarios. The difference between the models was the use of different measures on the Theory of Planned Behaviour (TPB) in the scenarios.

[94] See Chapter 4 on the differences between the formative and reflective constructs.

6.3.1 Content Validity

Content validity evaluates whether the measures used fully capture the domain of the construct (Straub et al., 2004). This is imperative to establish particularly when the research involves formative constructs (Petter et al., 2007). The common methods of establishing content validity are reviews of the literature (Petter et al., 2007), expert opinions and Q-sorting (Boudreau et al., 2001). Based on the recommendations several steps had been undertaken in this study to establish the content validity of the survey instrument.

First, a review of both New Zealand and Malaysian tax systems was performed to identify their uniqueness and distinct features. This is a crucial phase as the researcher needs to identify the key factors that are common to both countries for comparison purposes. Based on the information gained, merged with the relevant literature on tax compliance and Equity Theory, questions were subsequently formulated. Second, experts in the fields (taxation and research methodology) in both countries were asked to review and comment on the initial questionnaire. Based on their recommendations, a few items were added, deleted and modified in the initial questionnaire. Third, the questionnaires were sent out for pilot testing in New Zealand. In Malaysia, the pilot testing was only performed after the completion of the translation from the English language to Malay

language. Details on the pilot testing are set out in Chapter 4, in section 4.1.5 on pilot testing.

6.3.2 Construct Validity

Typically construct validity involves both convergent validity and discriminant validity. To meet these validity criteria, indicators are assumed to highly correlate with each other in measuring a particular construct. It would not be a problem for reflective constructs (with items developed to identify a similar underlying phenomenon) to meet this condition but it may be unrealistic for formative constructs to achieve this. In fact, performing a similar approach to formative constructs would be meaningless (Petter et al., 2007), since those constructs do not require the indicators to be highly correlated (Rossiter, 2002). Given these differences, the discussion on establishing the construct validity is separated based on the nature of the constructs.

6.3.2.1 Formative Constructs

A different approach to the conventional validity tests was used to assess the validity of the formative constructs. In this case, indicator weights that measure the contribution of each formative indicator were obtained from the bootstrapping procedure in the Partial Least Squares (PLS). The weights, coupled with the *t*-values, provided evidence of construct validity (Petter et al., 2007), and the extent (whether significant or not) to which a

particular indicator explains the variance in the formative construct (Roberts & Thatcher, 2009). A review of the results in Table 6.1 for Scenario 1 reveals that formative indicators for 'general fairness' and 'administrative fairness' were generally significant in both countries. On the other hand, two items measuring 'retributive fairness' (RF3) and 'content complexity' (CT1R), were completely insignificant in both New Zealand and Malaysian samples. Other non-significant indicators were RF1R in Malaysia, and GK2R, TK1, TK2 and TK3R in New Zealand. RF1R concerns with the retributive fairness of the income tax system, where taxpayers were asked on the fairness of the penalty imposed on tax evaders, while GK2R is a general knowledge item, which tested taxpayers' knowledge on the income tax rate, either flat or progressive. TK1, TK2 and TK3R are items measuring technical knowledge, which focus on responsibility to pay tax, tax on interest and tax deductions.[95] In sum, seven items were insignificant in this Scenario.

[95] The actual wording of the items are available in Appendix 5 on the model constructs and measures.

Table 6.1 Formative Constructs, Indicators and Weights
Scenario 1 (Overstating Business Expenses)

Construct and Items	New Zealand			Malaysia		
	PLS **Weights**	***t*-Statistics**	**Significance Level**	**PLS Weights**	***t*-Statistics**	**Significance Level**
General fairness						
GF1	0.8652	2.5292	0.005	0.4233	2.7419	0.005
GF2	-0.3336	1.0615	not sig.	0.7565	5.5654	0.005
GF3R	0.3918	1.4552	0.100	-0.2278	1.6578	0.050
Retributive fairness						
RF1R	0.3609	1.6005	0.100	0.0768	0.4492	not sig.
RF2	0.7203	2.4703	0.010	0.9573	13.7778	0.005
RF3	*-0.4503*	*0.9565*	*not sig.*	*0.1456*	*1.1087*	*not sig.*
Administrative fairness						
AF1	0.7662	2.7512	0.005	0.3140	2.7197	0.005
AF2	0.4911	1.9385	0.050	0.8869	14.8594	0.005
General knowledge						
GK1	1.0012	8.3676	0.005	0.9315	22.0205	0.005
GK2R	-0.0323	0.0873	not sig.	-0.2535	2.4162	0.010
Technical knowledge						
TK1	-0.1418	0.4144	not sig.	0.8645	9.1153	0.005
TK2	-0.1864	0.5002	not sig.	0.2572	2.7556	0.010
TK3R	0.1545	0.3269	not sig.	-0.1901	1.3137	0.100
TK4R	0.8631	1.7824	0.050	-0.2120	1.4581	0.100
Content complexity						
CT1R	*-0.3144*	*1.0028*	*not sig.*	*-0.0817*	*0.6359*	*not sig.*
CT2R	0.5059	2.1729	0.025	-0.2681	1.7707	0.050
CT3	0.7618	4.9935	0.005	1.0483	31.3977	0.005
CT4R	0.2863	1.9472	0.050	-0.1470	1.7929	0.050

* Italicised items are candidates for deletion

Table 6.2 for Scenario 2 shows comparable outcomes except, for several items, namely RF1R (fairness of the penalty, one item to measure retributive fairness) and TK3R (technical knowledge item relating to tax deductions), which were not significant in both environments, and TK4R (one item to measure technical knowledge), CT2R and CT4R (items measuring content complexity), which were not significant for Malaysian sample. Similar to TK3R, TK4R is also concerned with taxpayers' knowledge on tax deductions, while CT2R and CT4R are concerned with

the complexity of the content of the income tax law. Specifically, CT2R asked taxpayers' perceptions of the complexity of the tax guide while CT4R measures content complexity in terms of the assistance taxpayers need in coping with their tax matters. The results further suggest that three indicators (RF1R, TK3R and CT1R, representing retributive fairness, technical knowledge and content complexity, respectively), were insignificant in both samples.

Table 6.2 Formative Constructs, Indicators and Weights Scenario 2 (Understating Other Incomes)

Construct and Items	New Zealand			Malaysia		
	PLS Weights	*t*-Statistics	Significance Level	PLS Weights	*t*-Statistics	Significance Level
General fairness						
GF1	0.6156	1.6798	0.050	0.7219	5.8746	0.005
GF2	-0.5749	1.8589	0.050	0.4878	3.1588	0.005
GF3R	0.5115	1.3626	0.100	-0.2008	1.4343	0.100
Retributive fairness						
RF1R	*0.2892*	*0.9603*	*not sig.*	*-0.1158*	*0.7226*	*not sig.*
RF2	0.8615	2.0534	0.025	0.8468	5.0245	0.005
RF3	-0.1777	0.2927	not sig.	0.3230	1.9857	0.025
Administrative fairness						
AF1	0.4287	1.5446	0.100	0.3191	2.9465	0.005
AF2	0.8335	3.2074	0.005	0.8842	14.8294	0.005
General knowledge						
GK1	0.9787	7.3677	0.005	0.9173	17.1679	0.005
GK2R	-0.2107	0.8736	not sig.	-0.2873	2.8055	0.005
Technical knowledge						
TK1	-0.0524	0.1282	not sig.	0.8847	11.1842	0.005
TK2	0.0765	0.2129	not sig.	0.2653	2.5829	0.005
TK3R	*0.0905*	*0.1943*	*not sig.*	*-0.1538*	*0.8563*	*not sig.*
TK4R	0.9863	2.5859	0.005	-0.1163	0.8433	not sig.
Content complexity						
CT1R	*-0.4136*	*1.1790*	*not sig.*	*-0.1079*	*0.8139*	*not sig.*
CT2R	0.6231	2.2375	0.025	-0.1318	0.9706	not sig.
CT3	0.6834	3.1600	0.005	1.0548	44.1376	0.005
CT4R	0.3142	2.2429	0.025	-0.1275	1.2761	not sig.

* Italicised items are candidates for deletion

Overall combining the results in both Scenarios indicates that 10 indicators were not significantly related to the measured constructs. There are conflicting views on their appropriate treatment. While Diamontopolous and Winklhofer (2001) suggest that it is proper to eliminate any non-significant items to achieve all significant paths, other researchers (Bollen & Lennox, 1991; Cohen et al., 1990; Roberts & Thatcher, 2009) advise to retain them so as to preserve content validity. The proponents of this recommendation admit that statistical considerations are important but their conceptual reasoning holds more influence on the decisions whether to drop or retain the items (Cohen et al., 1990; Edwards & Bagozzi, 2000; Fornell et al., 1991; Petter et al., 2007). In this study, a compromise was made between these two views, of which some non-significant formative indicators were retained while others were dropped.

From Tables 6.1 and 6.2, four items representing 'retributive fairness', 'tax knowledge' and 'content complexity' (RF1R, RF3, TK3R and CT1R), were highlighted as the potential candidates for deletion as they were not significant in both data samples. However, only three were deleted, (that is, RF1R, TK3R and CT1R), measuring 'retributive fairness', 'technical knowledge' and 'content complexity', respectively. This cautious decision was made after a thorough review of those items to ensure that the construct was still measuring the entire domain and that content validity was preserved (Petter et al., 2007). For example, in the case of retributive

fairness, from a statistical point of view, two items were possible candidates for deletion (RF1R and RF3). However, RF1R was finally removed on the ground that this item was found to measure a similar underlying phenomenon with RF2 (concerning degree of punishment). This follows the suggestion of Petter et al. (2007), to delete all highly correlated constructs (reflective constructs) except one, to ensure that the construct is purely formative. Furthermore, if RF3 had been deleted, it would have affected content validity as the item (late payment penalty) contributed conceptually to the 'retributive fairness' construct.

A similar justification applies to the removal of TK3R and CT1. Apart from not being statistically significant, both items seemed to be duplicated by other items in the construct.

6.3.2.2 Reflective Constructs

To establish construct validity of reflective items requires the examination of both convergent validity and discriminant validity. Convergent validity occurs when each measurement indicator correlates strongly with its associated theoretical construct, while discriminant validity takes place when each indicator correlates weakly with all other constructs except its associated construct (Gefen & Straub, 2005).

a. Convergent Validity

Convergent validity requires the measures of each construct to correlate more with one another than with measures of another construct. One way of examining this is by observing the construct loadings and the corresponding *t*-statistics obtained in the PLS bootstrapping. While the recommended loadings should be greater than 0.7 (Chin, 1998a; 1998b; Dibbern & Chin, 2005; Hair et al., 2006), a loading of 0.5 and 0.6 is still acceptable for early stage scale development when there are additional indicators that exist for that construct (Chin, 1998b). Hair et al. (2006) further suggest the acceptable factor loading of 0.4 if the sample size is 200 or more. With regard to the *t*-statistics, Gefen and Straub (2005) advocate a value above 1.96 as evidence of convergent validity. Based on their recommendations, a minimum item loading of 0.6, with *t*-value of 1.96 and above, was adopted since most of the constructs were newly developed. Exceptions were granted for exchange fairness and compliance complexity constructs which have a minimum loading of 0.4. This approach was taken in order to maintain the rule of having at least two items per construct (Bagozzi & Heatherton, 1994; Rahim et al., 2001). As a result, six items (EF3R, VF3R, PF2R, CM2R, SND4, and PBD2R, representing exchange fairness, vertical fairness, personal fairness, compliance complexity, subjective norms and perceived behavioural control, respectively), were deleted to meet the above criteria.

For legal knowledge, two items of 'legal knowledge' (LK2 and LK3R) were below 0.4, and by right they should have been deleted to maintain the convergent validity. However, removal of both items would impede the more important rule of having at least two indicators, as suggested by previous studies. Thus a review was made on both sentences to identify one measure that deserved deletion. Out of these two items, one is a positively worded item and the other is negatively worded. While the purpose of mixing these two types of statement is to encourage a careful response (Barnette, 2000; Benson & Hocevar, 1985; Nardi, 2003; Nunnally & Bernstein, 1994), other research suggests that it might hinder respondents' ability to answer the questions correctly (Schriesheim & Hill, 1981). Furthermore, it is generally accepted that positively worded items are easier to understand in comparison to negatively worded items (Weems et al., 2006). Based on this argument, LK3R, with negative wording, was subsequently deleted from the model, resulting in the removal of seven items.

Similar logic might explain the low loadings of other deleted items, of which all were expressed in negative wording, except for subjective norms (SND4). Even though care has been taken in developing these items, the limited amount of literature justified addressing their convergence problem, and therefore removal of those items is deemed necessary. Furthermore, it is suggested that removing individual measures of

reflective constructs might improve construct validity without affecting content validity (Bollen & Lennox, 1991; Petter et al., 2007).

Another method of examining convergent validity is to examine the average variance extracted (AVE) (Dibbern & Chin, 2005). In order to be valid, the AVE should achieve the threshold of 0.5 and above (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). Table 6.3 reveals that the AVEs of five constructs (exchange fairness, vertical fairness, personal fairness, legal knowledge, and subjective norms), were originally below 0.4, but the values subsequently improved (refer to Table 6.4) when items with low loadings were removed.

Table 6.3 Reflective Constructs, Indicators and Loadings Scenario 1 (Overstating Business Expenses)

Construct and Items	New Zealand PLS Loadings	New Zealand *t*-Statistics	New Zealand Significance Level	Malaysia PLS Loadings	Malaysia *t*-Statistics	Malaysia Significance Level
Exchange fairness		AVE = 0.533			**AVE = 0.345**	
EF1	0.9024	20.9920	0.005	0.5002	1.8216	0.050
EF2	**0.4360**	1.9945	0.025	0.8310	7.4464	0.005
EF3R	*0.7715*	*9.9470*	*0.005*	*-0.3069*	*1.2513*	*not sig.*
Horizontal fairness		AVE = 0.625			AVE = 0.662	
HF1	0.7683	7.2648	0.005	0.8202	33.5986	0.005
HF2	0.8184	10.4580	0.005	0.8227	28.7036	0.005
HF3	0.7833	10.7652	0.005	0.7983	24.5437	0.005
Vertical fairness		AVE = 0.588			**AVE = 0.462**	
VF1	0.8369	7.1147	0.005	0.7971	20.8653	0.005
VF2	0.8979	4.7173	0.005	0.8437	24.2257	0.005
VF3R	*0.5070*	*1.7910*	*0.050*	*0.1944*	*1.6365*	*0.100*
Personal fairness		**AVE = 0.461**			**AVE = 0.411**	
PF1	0.8229	6.0374	0.005	0.8521	30.4674	0.005
PF2R	*-0.2802*	*0.7088*	*not sig.*	*0.0254*	*0.2119*	*not sig.*
PF3	0.7924	4.9791	0.005	0.7116	13.5811	0.005
Legal knowledge		**AVE = 0.329**			**AVE = 0.495**	
LK1	-0.5396	1.1912	not sig.	0.7330	15.6753	0.005
LK2	**-0.3176**	0.6972	not sig.	0.9146	60.0122	0.005
LK3R	*0.7708*	*1.2276*	*not sig.*	*0.3346*	*3.1343*	*0.005*

Compliance complexity		**AVE = 0.479**			AVE = 0.530	
CM1	**0.5232**	1.6411	0.050	0.9215	65.1418	0.005
CM2R	*0.6963*	*2.1492*	*0.025*	*0.0899*	*0.7067*	*not sig.*
CM3	0.8245	5.5878	0.005	0.8553	28.1493	0.005
Intention		AVE = 0.694			AVE = 0.618	
IND1R	0.8356	21.2949	0.005	0.7136	20.4965	0.005
IND2	0.7931	17.9954	0.005	0.8534	59.0471	0.005
IND3	0.8695	36.4095	0.005	0.7853	32.6540	0.005
Affective attitude		AVE = 0.740			AVE = 0.631	
AFD1	0.8903	49.8605	0.005	0.8519	41.5851	0.005
AFD2	0.9103	61.4738	0.005	0.8833	70.5394	0.005
AFD3R	0.7738	21.3406	0.005	0.6225	14.4519	0.005
Instrumental attitude		AVE = 0.552			AVE = 0.648	
ISD1R	0.8200	3.1389	0.005	0.7869	8.0782	0.005
ISD2R	0.6575	1.9784	0.025	0.8228	7.4612	0.005
Subjective norms		AVE = 0.660			**AVE = 0.460**	
SND1R	0.7815	19.1537	0.005	0.6776	15.6683	0.005
SND2	0.7956	16.7178	0.005	0.7649	28.9798	0.005
SND3R	0.8701	36.6703	0.005	0.7399	23.3800	0.005
SND4	*0.7989*	*19.8094*	*0.005*	*0.4970*	*7.9625*	*0.005*
Perceived control		AVE = 0.551			AVE = 0.530	
PBD1	0.7581	7.3978	0.005	0.7732	21.2236	0.005
PBD2R	*0.6212*	*4.1463*	*0.005*	*0.1618*	*1.7786*	*0.050*
PBD3	0.8423	18.5455	0.005	0.7529	19.8592	0.005
PBD4	0.7928	11.5007	0.005	0.8827	72.0830	0.005
PBD5	0.6761	5.7850	0.005	0.8261	34.6251	0.005

* Figures in bold indicate loadings or AVE below 0.6 or 0.5, respectively; while italicised items represent items to be deleted.

Apart from improved AVEs, the revised model of all 28 remaining items also showed higher loadings of at least 0.6, except for one exchange fairness item (EF2) with a loading of 0.5839. If EF2 has been deleted only one item would have remained as a measure of exchange fairness (Table 6.4). This would breach the requirement of minimum two items per construct (Bagozzi & Heatherton, 1994; Rahim et al., 2001). Therefore, this item has been retained for subsequent analysis.

Table 6.4 Reflective Constructs, Indicators and Loadings Scenario 1 (Revised model)

Construct and Items	New Zealand PLS Loadings	New Zealand *t*-Statistics	New Zealand Significance Level	Malaysia PLS Loadings	Malaysia *t*-Statistics	Malaysia Significance Level
Exchange fairness		AVE = 0.600			AVE = 0.528	
EF1	0.9269	9.9717	0.005	0.6672	4.7341	0.005
EF2	0.5839	2.5331	0.005	0.7815	7.1663	0.005
Horizontal fairness		AVE = 0.616			AVE = 0.662	
HF1	0.7077	5.6795	0.005	0.8204	31.6415	0.005
HF2	0.8087	8.3191	0.005	0.8201	26.4695	0.005
HF3	0.8324	9.2342	0.005	0.8005	27.0046	0.005
Vertical fairness		AVE = 0.761			AVE = 0.674	
VF1	0.8501	11.1698	0.005	0.7973	23.3311	0.005
VF2	0.8942	7.5493	0.005	0.8437	31.0847	0.005
Personal fairness		AVE = 0.699			AVE = 0.616	
PF1	0.8187	7.7436	0.005	0.8513	36.4591	0.005
PF3	0.8526	7.8813	0.005	0.7127	18.3457	0.005
Legal knowledge		AVE = 0.640			AVE = 0.713	
LK1	0.8567	10.8130	0.005	0.7624	17.1443	0.005
LK2	0.7394	6.4629	0.005	0.9193	60.8028	0.005
Compliance complexity		AVE = 0.699			AVE = 0.798	
CM1	0.7081	4.0605	0.005	0.9229	82.2211	0.005
CM3	0.9473	8.5038	0.005	0.8622	39.0363	0.005
Intention		AVE = 0.694			AVE = 0.618	
IND1R	0.8338	18.7353	0.005	0.7176	20.0676	0.005
IND2	0.7952	21.3835	0.005	0.8523	59.2431	0.005
IND3	0.8692	30.8218	0.005	0.7832	34.2529	0.005
Affective attitude		AVE = 0.740			AVE = 0.631	
AFD1	0.8904	52.1206	0.005	0.8517	38.2859	0.005
AFD2	0.9103	56.8191	0.005	0.8831	70.5822	0.005
AFD3R	0.7736	17.6830	0.005	0.6231	14.8012	0.005
Instrumental attitude		AVE = 0.552			AVE = 0.648	
ISD1R	0.8289	4.7396	0.005	0.7930	5.5754	0.005
ISD2R	0.6456	1.9678	0.100	0.8172	5.1226	0.005
Subjective norms		AVE = 0.702			AVE = 0.559	
SND1R	0.8201	22.8035	0.005	0.7152	18.8990	0.005
SND2	0.8124	20.1660	0.005	0.7563	29.3463	0.005
SND3R	0.8793	36.3195	0.005	0.7712	24.3040	0.005
Perceived control		AVE = 0.596			AVE = 0.658	
PBD1	0.7134	7.6304	0.005	0.7760	24.1612	0.005
PBD3	0.8491	17.1803	0.005	0.7564	20.7242	0.005
PBD4	0.7800	10.2843	0.005	0.8833	74.4170	0.005
PBD5	0.7378	8.1040	0.005	0.8239	31.5255	0.005

A similar approach was conducted on Scenario 2 (relating to understating other income), where the analysis produced similar results (Table 6.5). The loadings for personal fairness (PF1), legal knowledge (LK2) and

instrumental attitude (ISS2R) items were slightly lower, but still above 0.5 (Chin, 1998a). These items were therefore retained to improve the reliability of the construct (personal fairness and legal knowledge), and meet the minimum requirement of two items per construct (instrumental attitude). Consequently, parallel to Scenario 1, seven items with low loadings (EF3R, VF3R, PF2R, LK3R, CM2R, SNS4 and PBS1R, representing exchange fairness, vertical fairness, personal fairness, legal knowledge, compliance complexity, subjective norms and perceived behavioural control, respectively), were deleted.

In terms of AVE, four constructs (exchange fairness, vertical fairness, personal fairness and legal knowledge) had values below the threshold of 0.5, providing support to remove several items, as suggested by the item loadings.

Table 6.5 Reflective Constructs, Indicators and Loadings Scenario 2 (Understating Other Incomes)

Construct and Items	New Zealand PLS Loadings	New Zealand *t*-Statistics	New Zealand Significance Level	Malaysia PLS Loadings	Malaysia *t*-Statistics	Malaysia Significance Level
Exchange fairness		**AVE = 0.492**			**AVE = 0.373**	
EF1	0.9387	8.7692	0.005	0.8391	4.1319	0.005
EF2	**0.4775**	3.0183	0.005	**0.5419**	1.7733	0.050
EF3R	*0.6045*	*5.1633*	*0.005*	*0.3483*	*0.8488*	*not sig.*
Horizontal fairness		AVE = 0.592			AVE = 0.661	
HF1	0.6640	3.5971	0.005	0.8130	34.0252	0.005
HF2	0.7728	4.5972	0.005	0.8154	22.4026	0.005
HF3	0.8585	4.8514	0.005	0.8115	26.1232	0.005
Vertical fairness		AVE = 0.579			**AVE = 0.463**	
VF1	0.8643	7.0623	0.005	0.8164	26.3240	0.005
VF2	0.9199	7.9334	0.005	0.8258	27.7621	0.005
VF3R	*0.3787*	*1.8073*	*0.050*	*0.2034*	*1.8185*	*0.050*
Personal fairness		**AVE = 0.443**			**AVE = 0.410**	
PF1	**0.5958**	2.9599	0.005	0.8404	26.9001	0.005
PF2R	*0.5011*	*1.2069*	*not sig.*	*-0.0506*	*0.3933*	*not sig.*
PF3	0.8506	4.4692	0.005	0.7220	17.6894	0.005
Legal knowledge		**AVE = 0.381**			**AVE = 0.494**	
LK1	0.8033	3.1726	0.005	0.7127	12.4842	0.005
LK2	**0.5933**	2.2404	0.025	0.9223	68.0397	0.005
LK3R	*-0.3810*	*0.6592*	*not sig.*	*0.3492*	*3.1737*	*0.005*
Compliance complexity		AVE = 0.525			AVE = 0.535	
CM1	0.7412	2.7516	0.005	0.9200	68.6230	0.005
CM2R	*0.6174*	*1.6707*	*0.050*	*0.1211*	*0.9739*	*not sig.*
CM3	0.8026	4.4471	0.005	0.8622	30.3890	0.005
Intention		AVE = 0.741			AVE = 0.670	
INS1	0.9399	8.9477	0.005	0.8883	95.6698	0.005
INS2	0.7746	7.7608	0.005	0.7907	30.8406	0.005
INS3R	0.8597	8.6790	0.005	0.7721	30.2272	0.005
Affective attitude		AVE = 0.738			AVE = 0.711	
AFS1	0.9052	8.8696	0.005	0.9043	78.9188	0.005
AFS2	0.8717	8.5753	0.005	0.9034	72.0915	0.005
AFS3R	0.7967	8.6258	0.005	0.7063	20.7253	0.005
Instrumental attitude		AVE = 0.565			AVE = 0.570	
ISS1	0.7220	5.0835	0.005	0.8943	29.8622	0.005
ISS2R	0.7801	5.7637	0.005	**0.5835**	7.1217	0.005
Subjective norms		AVE = 0.595			AVE = 0.642	
SNS1R	0.8129	8.2281	0.005	0.8386	47.8350	0.005
SNS2	0.8935	8.8298	0.005	0.7443	29.1542	0.005
SNS3R	0.8732	8.6875	0.005	0.7884	30.7893	0.005
SNS4 / SNS4R	*0.3977*	*4.0450*	*0.005*	*0.8313*	*44.9107*	*0.005*

Perceived control	AVE = 0.581			AVE = 0.533		
PBS1R	*0.3181*	*2.8309*	*0.005*	*0.2293*	*2.9023*	*0.005*
PBS2	0.7888	7.8373	0.005	0.7672	26.9629	0.005
PBS3	0.8480	8.6686	0.005	0.7575	23.4037	0.005
PBS4	0.8829	8.6172	0.005	0.8786	63.8594	0.005
PBS5	0.8250	8.5912	0.005	0.8236	39.4065	0.005

* Figures in bold indicate loadings or AVE below 0.6 or 0.5, respectively; while italicised items represent items to be deleted.

The re-run test on the remaining indicators indicated better loadings as displayed in Table 6.6. In fact, the loadings for all items have increased to more than 0.6, except for the 'instrumental attitude' item (ISS2R) for which the loading was stable at 0.58. In addition to this, the AVEs, particularly of the four constructs identified earlier, had also improved significantly, which satisfied the convergent validity condition (Fornell & Larcker, 1981).

Table 6.6 Reflective Constructs, Indicators and Loadings Scenario 2 (Revised Model)

Construct and Items	New Zealand PLS Loadings	New Zealand *t*-Statistics	New Zealand Significance Level	Malaysia PLS Loadings	Malaysia *t*-Statistics	Malaysia Significance Level
Exchange fairness		AVE = 0.603			AVE = 0.528	
EF1	0.9169	12.3140	0.005	0.7924	7.9051	0.005
EF2	0.6047	3.0872	0.005	0.6540	4.8302	0.005
Horizontal fairness		AVE = 0.595			AVE = 0.661	
HF1	0.6109	3.4099	0.005	0.8133	32.3795	0.005
HF2	0.8082	5.6337	0.005	0.8109	22.1034	0.005
HF3	0.8703	7.0942	0.005	0.8151	25.3093	0.005
Vertical fairness		AVE = 0.762			AVE = 0.674	
VF1	0.8722	16.0155	0.005	0.8165	27.2260	0.005
VF2	0.8739	16.8778	0.005	0.8258	25.3514	0.005
Personal fairness		AVE = 0.681			AVE = 0.617	
PF1	0.7015	5.6147	0.005	0.8437	32.5484	0.005
PF3	0.9330	6.6159	0.005	0.7227	15.9622	0.005
Legal knowledge		AVE = 0.639			AVE = 0.710	
LK1	0.8696	12.0432	0.005	0.7471	18.2436	0.005
LK2	0.7219	6.7950	0.005	0.9282	65.8648	0.005
Compliance complexity		AVE = 0.711			AVE = 0.798	
CM1	0.7560	9.3553	0.005	0.9201	76.5415	0.005
CM3	0.9224	6.7889	0.005	0.8658	43.9460	0.005
Intention		AVE = 0.760			AVE = 0.670	
INS1	0.9342	95.5884	0.005	0.8884	99.4664	0.005
INS2	0.8303	21.5070	0.005	0.7921	27.8647	0.005
INS3R	0.8469	27.4275	0.005	0.7707	27.5944	0.005
Affective attitude		AVE = 0.710			AVE = 0.711	
AFS1	0.8555	22.5390	0.005	0.9055	84.4308	0.005
AFS2	0.8962	53.2312	0.005	0.9044	81.4470	0.005
AFS3R	0.7720	20.1922	0.005	0.7038	25.2547	0.005
Instrumental attitude		AVE = 0.591			AVE = 0.570	
ISS1	0.7924	5.9851	0.005	0.8953	35.6605	0.005
ISS2R	0.7444	5.8530	0.005	**0.5818**	8.4530	0.005
Subjective norms		AVE = 0.747			AVE = 0.654	
SNS1R	0.7949	18.6877	0.005	0.8492	55.4851	0.005
SNS2	0.9074	68.8070	0.005	0.7896	40.3286	0.005
SNS3R	0.8856	35.7852	0.005	0.7866	31.5517	0.005
Perceived control		AVE = 0.682			AVE = 0.676	
PBS2	0.8168	19.7141	0.005	0.7843	37.1882	0.005
PBS3	0.8441	33.2785	0.005	0.7756	33.2751	0.005
PBS4	0.8795	35.0175	0.005	0.8898	77.4915	0.005
PBS5	0.7588	20.9016	0.005	0.8336	42.2967	0.005

b. Discriminant Validity

Discriminant validity demands a strong correlation between an indicator and its associated construct but weak correlation with all other constructs (Gefen & Straub, 2005). The two procedures used to assess discriminant validity are (1) item cross-loadings; and (2) the ratio of the square root of the AVE of each construct to the correlations of this construct to all other constructs (Gefen & Straub, 2005).

To obtain the cross-loadings correlation matrices were generated (using SPSS) by correlating the scores of each latent variable with their respective block of indicators and all other items in the model (Chin, 1998b). The results are presented in Tables 6.7 to 6.10 for both scenarios applying the New Zealand and Malaysian data. Moving across the rows and down the columns of the matrix reveals that each item loads higher on its corresponding construct than any other construct, providing support that the latent component scores predict each indicator in its block better than indicators in other blocks (Chin, 1998b). For instance, indicators IND1R, IND2 and IND3 have higher loadings in the intention to comply (IND) column compared with their loadings in other constructs. This instance suggests that IND1R, IND2 and IND3 are the correct measures of intention to comply.

Table 6.7 Loading and Cross-loading Matrix
Scenario 1 - New Zealand (Overstating Business Expenses)

	IND	AFD	ISD	SND	PBD	GF*	EF	HF	VF	RF*	PF	AF*	GK*	LK	TK*	CT*	CM
IND1R	**.83**	.50	.07	.42	-.25	.08	-.01	.06	.02	.13	.11	-.07	.10	.09	.10	.07	.04
IND2	**.79**	.52	.06	.36	-.35	.15	-.05	.10	-.02	.14	.10	-.11	.00	.09	.12	-.00	.05
IND3	**.86**	.64	.06	.43	-.27	.01	-.11	.08	-.04	.20	.07	-.11	.04	.07	.12	-.01	.11
AFD1	.57	**.89**	.11	.41	-.38	-.00	-.04	.11	-.05	.14	.01	-.09	-.05	-.08	-.04	.01	.09
AFD2	.58	**.91**	.14	.37	-.36	.05	-.01	.10	-.10	.07	.06	.02	.01	-.01	-.05	.11	.12
AFD3R	.58	**.77**	.14	.50	-.34	.04	.00	.07	.06	.17	.05	-.00	.04	.10	.10	.11	.08
ISD1R	.08	.07	**.82**	.12	-.19	-.12	-.01	-.05	-.04	-.07	.06	-.15	-.13	-.09	.00	-.01	-.01
ISD2R	.03	.17	**.64**	.14	-.13	-.03	.02	-.08	-.05	-.12	.11	.01	-.09	-.23	-.10	.06	.06
SND1R	.37	.32	.10	**.82**	-.26	.01	-.03	.07	.01	.13	.05	-.12	.05	.07	.18	.03	.06
SND2	.41	.43	.11	**.81**	-.27	.05	-.03	.13	-.07	.18	.01	-.14	.09	.03	.11	.04	.12
SND3R	.44	.49	.21	**.87**	-.31	.05	-.04	.11	-.02	.12	.06	-.02	.00	.05	.18	.14	.19
PBD1	-.13	-.26	-.21	-.19	**.71**	-.01	.05	-.14	.04	.07	.01	.18	.00	.12	.20	.04	.05
PBD3	-.31	-.42	-.16	-.29	**.84**	.01	.02	-.14	-.04	-.02	-.11	.14	-.02	.03	.12	.02	-.02
PBD4	-.21	-.27	-.14	-.21	**.78**	.01	.07	-.17	.03	-.01	-.08	.16	.02	.01	.08	.11	.08
PBD5	-.35	-.31	-.16	-.31	**.73**	-.11	.02	-.01	-.06	-.02	.04	.16	.01	.07	-.07	-.05	.01
GF1	.09	.02	-.08	.04	-.06	**.83**	.34	.08	.20	-.01	.21	.07	.23	.09	.13	.23	.13
GF2	-.07	.01	.05	.00	-.03	**-.10**	.21	.07	.10	-.04	.20	.24	.03	.01	-.03	-.01	-.02
GF3R	.00	.03	-.06	.03	.00	**.61**	.39	-.12	.24	-.01	.00	.10	.05	-.01	.11	.25	.09
EF1	-.10	-.02	.01	-.03	.07	.32	**.92**	-.01	.33	.03	.09	.28	.28	.08	.04	.32	.14
EF2	.03	-.01	-.03	-.03	-.04	.31	**.58**	.08	.58	.25	.17	.10	.15	.04	.12	.12	-.02
HF1	.07	.10	-.04	.11	-.07	.06	.10	**.70**	.18	.15	.21	-.01	.03	.04	-.12	.07	.09
HF2	.08	.06	-.11	.16	-.05	-.01	.08	**.80**	.14	.27	.19	-.01	.17	.15	.07	.04	-.01
HF3	.08	.10	-.04	.05	-.17	-.04	-.07	**.83**	-.03	.11	.17	-.01	.12	.22	-.09	.05	.01
VF1	-.04	-.04	-.03	-.08	-.03	.19	.43	.05	**.85**	.12	.09	.03	.19	.03	.02	.04	-.11
VF2	.01	-.01	-.07	.01	-.01	.23	.45	.11	**.89**	.16	.12	.06	.24	.08	.15	.10	.04
RF2	.18	.14	-.14	.11	.03	.07	.24	.23	.22	**.90**	.11	.00	.22	.08	.18	.03	.01
RF3	-.06	-.04	-.00	-.15	.09	.14	.25	-.01	.10	**-.35**	.12	.29	.17	.15	-.07	.25	.18
PF1	.10	.01	.16	.01	-.10	.10	.18	.18	.12	.00	**.81**	.01	.08	.07	-.11	.08	.07
PF3	.08	.07	.03	.08	.01	.07	.06	.21	.08	.08	**.85**	.02	.17	.07	-.19	.01	-.02
AF1	-.10	-.06	-.13	-.13	.26	.00	.22	-.02	.01	-.12	.05	**.90**	.13	.24	.02	.26	.15
AF2	-.07	.06	-.01	-.02	-.01	.07	.22	.01	.10	-.05	-.04	**.62**	.17	.03	-.03	.25	.07
GK1	.07	.01	-.16	.07	-.01	.20	.29	.15	.25	.14	.15	.17	**.99**	.31	.00	.17	.10
GK2R	.23	.12	-.04	.28	-.15	.08	-.06	.06	.01	.09	-.04	-.11	**-.01**	.12	.24	.08	.10
LK1	.09	.01	-.12	.02	.07	.03	.06	.164	.07	.00	.07	.21	.25	**.85**	-.01	-.02	.07
LK2	.06	.00	-.22	.08	.05	.07	.07	.15	.04	.03	.07	.10	.23	**.73**	.02	.11	.15
TK1	-.09	-.01	-.08	-.02	-.01	.03	.01	.04	-.06	.03	.18	.08	.09	.17	**-.22**	.08	.05
TK2	-.16	.00	-.10	-.02	.02	-.01	-.05	.11	-.06	-.07	.17	-.01	.11	.09	**-.48**	-.05	-.01
TK4R	.09	.00	-.11	.20	.10	.19	.08	-.02	.09	.21	-.12	.01	.03	.07	**.94**	.33	.21
CT2R	.03	.10	.10	.08	.01	.24	.20	.03	.03	-.03	-.03	.18	.15	.03	.36	**.63**	.43
CT3	.01	.10	.01	.09	.01	.26	.28	.07	.06	-.06	.09	.31	.14	.05	.14	**.90**	.44
CT4R	.02	-.07	-.05	.01	.06	.18	.14	-.00	.11	-.03	-.01	.14	.03	-.01	.31	**.49**	.38
CM1	.02	.02	-.03	.10	.07	.04	.05	.05	-.08	.05	.02	.10	.09	.12	.21	.41	**.70**
CM3	.10	.13	.04	.15	-.00	.18	.11	.01	-.01	-.10	.02	.15	.07	.11	.13	.52	**.94**

* = formative constructs, therefore loadings are not interpreted.
Bolded figures in each block indicate that the constructs are well-measured by their indicators.

Table 6.8 Loading and Cross-loading Matrix
Scenario 1 – Malaysia (Overstating Business Expenses)

	IND	AFD	ISD	SND	PBD	GF*	EF	HF	VF	RF*	PF	AF*	GK*	LK	TK*	CT*	CM
IND1R	**.71**	.39	.26	.47	-.30	-.14	-.05	-.24	-.01	.02	-.01	-.09	.012	.01	-.10	-.05	.04
IND2	**.85**	.55	.05	.49	-.17	-.02	.10	-.12	.10	.09	.08	.04	.090	.10	.06	.15	.14
IND3	**.78**	.57	.13	.48	-.10	.06	.12	-.11	.13	.22	.22	.12	.178	.20	.14	.21	.15
AFD1	.52	**.85**	.12	.36	-.18	.03	.04	-.07	.11	.10	.16	.09	.147	.16	.14	.08	.07
AFD2	.58	**.88**	.16	.44	-.17	.04	.11	-.10	.11	.15	.23	.12	.154	.16	.16	.14	.13
AFD3R	.44	**.62**	.27	.51	-.45	-.10	-.01	-.21	.03	.03	.04	-.08	.028	.05	-.06	-.05	.07
ISD1R	.11	.12	**.79**	.20	-.35	.07	-.06	.07	-.01	.01	.07	-.01	.010	-.01	-.02	-.04	.01
ISD2R	.17	.23	**.81**	.32	-.43	-.02	-.02	-.05	-.04	.01	.01	-.06	-.060	.01	-.09	-.07	.00
SND1R	.37	.38	.32	**.71**	-.34	-.08	-.05	-.26	-.01	.12	.02	-.04	.010	.06	-.02	-.03	.01
SND2	.53	.42	.08	**.75**	-.13	.12	.18	-.02	.17	.20	.20	.17	.205	.10	.14	.22	.17
SND3R	.44	.42	.38	**.77**	-.43	-.03	.03	-.15	-.01	.09	.01	-.06	.060	.01	-.04	.01	.06
PBD1	-.23	-.30	-.45	-.36	**.77**	-.00	.01	.09	-.01	.03	.00	.02	.081	.07	.09	.04	-.02
PBD3	-.08	-.11	-.36	-.18	**.75**	.04	.14	.08	.09	.11	.10	.11	.146	.16	.13	.16	.08
PBD4	-.19	-.25	-.41	-.34	**.88**	.05	.04	.09	.09	.10	.06	.07	.136	.13	.16	.15	.04
PBD5	-.24	-.32	-.37	-.34	**.82**	.05	.01	.08	-.00	.03	.04	.10	.089	.08	.12	.11	.05
GF1	.01	.02	.02	.03	-.01	**.65**	.33	.16	.05	.03	.27	.38	.232	.06	.03	.20	.12
GF2	-.04	-.01	.04	.01	.06	**.90**	.25	.21	.13	.08	.37	.32	.189	.08	.20	.29	.13
GF3R	.01	.03	.06	.05	-.02	**-.17**	-.06	-.11	-.11	-.06	.01	.02	-.002	-.02	-.05	-.07	-.01
EF1	.06	.05	-.02	.06	-.01	.46	**.66**	.11	.05	.05	.31	.39	.182	.09	.03	.19	.11
EF2	.06	.04	-.04	.06	.08	.08	**.78**	.14	.49	.18	.24	.13	.157	.19	.20	.14	.05
HF1	-.16	-.12	-.00	-.17	.10	.17	.11	**.82**	.05	.01	.10	.16	.050	.02	.08	.10	-.01
HF2	-.13	-.12	.01	-.11	.04	.19	.15	**.82**	.11	.02	.10	.15	.108	.01	.09	.11	-.05
HF3	-.18	-.13	.01	-.14	.11	.24	.15	**.80**	.13	.06	.11	.18	.100	.04	.07	.13	.05
VF1	.05	.06	-.08	.03	.07	.14	.25	.13	**.77**	.15	.25	.16	.255	.16	.23	.16	.13
VF2	.11	.11	.01	.09	.01	.11	.39	.08	**.84**	.19	.28	.09	.271	.13	.27	.12	.04
RF2	.15	.13	.01	.19	.08	.06	.15	.02	.25	**.99**	.27	.13	.324	.34	.29	.17	.13
RF3	.01	.00	.00	.04	.05	.16	.11	.12	.03	**.38**	.12	.24	.111	.17	.10	.22	.16
PF1	.13	.18	.04	.10	.05	.38	.25	.05	.17	.20	**.85**	.26	.332	.24	.24	.26	.22
PF3	.07	.11	.05	.07	.04	.21	.36	.17	.39	.24	**.71**	.29	.230	.16	.22	.24	.12
AF1	-.01	.02	.02	.03	.05	.25	.23	.13	.12	.10	.24	**.48**	.106	.14	.11	.16	.17
AF2	.05	.06	-.06	.04	.09	.36	.31	.18	.15	.14	.31	**.95**	.286	.19	.12	.31	.24
GK1	.15	.16	-.02	.14	.11	.20	.22	.05	.36	.33	.35	.27	**.967**	.40	.32	.34	.22
GK2R	.07	.02	.02	.00	-.10	-.22	-.07	-.20	-.00	-.07	-.11	-.13	**-.393**	-.14	-.19	-.21	-.10
LK1	-.01	.01	-.01	.01	.14	.07	.16	.06	.04	.18	.15	.12	.279	**.76**	.14	.13	.10
LK2	.20	.22	.00	.10	.10	.08	.18	.01	.21	.37	.27	.22	.402	**.91**	.31	.26	.25
TK1	.11	.16	-.05	.10	.10	.15	.18	.03	.22	.30	.30	.14	.350	.31	**.94**	.21	.21
TK2	-.02	-.00	-.05	-.02	.09	.08	.01	.13	.17	.11	.11	.06	.147	.06	**.46**	.10	.09
TK4R	.20	.19	.09	.18	-.19	-.09	-.03	-.19	-.07	.04	.03	.00	.003	.05	**-.14**	-.05	.29
CT2R	.09	.09	.14	.16	-.15	-.00	-.00	-.12	-.01	-.01	-.01	.05	.001	-.01	-.09	**-.06**	.40
CT3	.19	.13	-.01	.17	.08	.30	.21	.07	.16	.20	.31	.32	.360	.25	.18	**.93**	.56
CT4R	.17	.17	.12	.13	-.10	-.04	-.02	-.19	.01	.09	.06	.00	.021	.09	-.03	**-.04**	.38
CM1	.14	.13	.01	.13	.03	.14	.10	-.01	.14	.14	.23	.26	.246	.22	.17	.35	**.92**
CM3	.11	.08	.00	.08	.05	.14	.09	.01	.03	.10	.16	.21	.162	.17	.08	.39	**.862**

* = formative constructs, therefore loadings are not interpreted.
Bolded figures in each block indicate that the constructs are well-measured by their indicators.

Table 6.9 Loading and Cross-loading Matrix
Scenario 2 - New Zealand (Understating Other Incomes)

	INS	AFS	ISS	SNS	PBS	GF*	EF	HF	VF	RF*	PF	AF*	GK*	LK	TK*	CT*	CM
INS1	**.93**	.75	.41	.70	-.50	.11	.18	-.05	.08	.06	.01	.09	.07	.00	-.02	.29	.06
INS2	**.83**	.64	.33	.57	-.47	-.06	-.01	-.02	-.03	-.05	.02	.08	.02	-.07	-.08	.11	-.03
INS3R	**.84**	.65	.30	.63	-.42	.14	.14	.07	.07	.07	.08	.09	.05	.09	.05	.23	.06
AFS1	.60	**.85**	.28	.47	-.34	-.04	.07	-.07	.00	.05	.01	.01	.06	-.10	.02	.09	.01
AFS2	.69	**.89**	.33	.54	-.44	.05	.08	-.01	-.01	.05	.02	-.02	-.02	-.09	.08	.17	.01
AFS3R	.68	**.77**	.29	.58	-.40	.08	.04	.06	-.05	.04	.01	.06	.02	.07	-.03	.17	.11
ISS1	.33	.31	**.79**	.28	-.40	-.10	.03	.04	-.01	-.01	.08	-.02	-.01	-.15	.09	.07	-.01
ISS2R	.28	.24	**.74**	.22	-.30	-.06	.02	-.13	-.01	.05	-.02	-.07	-.07	-.22	-.10	.09	.10
SNS1R	.51	.41	.12	**.79**	-.22	.06	.05	.11	.00	.08	.03	.11	.05	.09	-.00	.22	.11
SNS2	.75	.68	.44	**.90**	-.44	.00	.09	.05	.02	.03	.09	.05	-.04	-.05	.02	.18	.03
SNS3R	.60	.52	.25	**.88**	-.34	.07	.10	.10	.04	-.01	-.01	.01	.08	.01	-.05	.23	.12
PBS2	-.34	-.30	-.40	-.25	**.81**	.08	.01	-.11	-.04	.13	-.13	.08	-.06	.07	-.13	.05	.06
PBS3	-.47	-.42	-.47	-.36	**.84**	.07	-.03	-.11	.03	.00	-.02	.01	.00	.10	-.11	-.05	.01
PBS4	-.42	-.41	-.38	-.32	**.87**	.04	.01	-.07	-.01	.17	-.05	.11	.02	.18	-.08	.05	.07
PBS5	-.51	-.41	-.27	-.36	**.75**	-.13	-.06	-.03	-.09	.03	.04	.12	-.06	.04	.05	-.06	.01
GF1	.04	-.01	-.12	.05	-.01	**.82**	.34	.08	.20	.17	.19	.08	.22	.09	.01	.23	.13
GF2	.01	-.09	.01	.03	-.07	**-.03**	.21	.06	.10	.03	.18	.24	.04	.01	.08	-.01	-.02
GF3R	.08	.04	-.01	.03	-.00	**.66**	.39	-.14	.24	.06	.00	.10	.04	-.01	-.05	.25	.08
EF1	.11	.11	.05	.12	-.01	.34	**.91**	-.01	.33	.32	.07	.28	.29	.08	-.01	.32	.13
EF2	.08	-.03	-.02	-.00	-.05	.33	**.60**	.05	.58	.16	.15	.10	.14	.05	-.11	.12	-.02
HF1	-.01	-.03	.01	.09	-.00	.06	.10	**.61**	.18	.05	.20	-.01	.03	.04	.09	.07	.09
HF2	.01	-.02	-.07	.07	-.09	-.01	.09	**.80**	.14	.06	.19	-.02	.16	.14	-.01	.04	.00
HF3	-.01	.01	-.03	.08	-.08	-.06	-.07	**.87**	-.03	.10	.17	-.00	.12	.22	.12	.05	.01
VF1	.05	-.01	-.01	-.01	-.05	.20	.43	.03	**.87**	.09	.08	.03	.19	.04	-.08	.04	-.11
VF2	.04	-.04	-.02	.05	-.01	.24	.46	.09	**.87**	.22	.11	.06	.23	.08	-.10	.11	.03
RF2	.15	.15	-.03	.13	.02	.06	.25	.23	.22	**.50**	.12	.01	.21	.08	-.01	.03	.02
RF3	-.03	-.01	.05	-.02	.10	.15	.25	-.00	.09	**.89**	.11	.31	.18	.15	.16	.25	.18
PF1	.01	-.00	.09	.02	-.06	.11	.18	.17	.12	.13	**.70**	.01	.09	.07	.12	.08	.07
PF3	.05	.02	.01	.05	-.02	.08	.07	.21	.08	.13	**.93**	.02	.17	.07	.29	.01	-.02
AF1	.08	-.01	-.08	.06	.06	.01	.21	-.02	.01	.14	.04	**.87**	.14	.24	.03	.26	.15
AF2	.08	.05	-.00	.04	.10	.08	.22	.01	.10	.33	-.03	**.66**	.18	.03	.03	.24	.07
GK1	.08	.03	-.07	.05	-.03	.20	.29	.16	.25	.24	.16	.18	**.98**	.31	.10	.17	.10
GK2R	.12	.08	-.13	.14	-.03	.08	-.06	.05	.01	-.05	-.04	-.11	**-.10**	.12	-.18	.08	.11
LK1	-.03	-.07	-.21	-.02	.11	.03	.06	.17	.07	.17	.07	.21	.24	**.87**	.06	-.02	.07
LK2	.06	.00	-.18	.05	.08	.07	.07	.17	.03	.09	.07	.10	.21	**.72**	.20	.11	.15
TK1	.07	.04	-.05	.07	-.11	.03	.01	.04	-.06	.13	.19	.08	.09	.17	**.76**	.08	.05
TK2	-.07	.02	.04	-.02	.05	-.01	-.05	.10	-.06	.12	.18	-.01	.12	.09	**.66**	-.05	-.01
TK4R	.12	.03	-.06	.16	.09	.19	.08	-.01	.08	.08	-.13	.01	.01	.06	**-.41**	.33	.22
CT2R	.17	.13	.03	.09	.04	.24	.20	.03	.03	.15	-.03	.18	.13	.02	-.16	**.64**	.43
CT3	.23	.17	.15	.26	-.04	.26	.28	.07	.06	.20	.08	.31	.15	.04	.06	**.90**	.44
CT4R	.08	.04	-.07	.09	.03	.17	.14	-.01	.10	.15	-.03	.14	.01	-.01	-.23	**.51**	.39
CM1	.03	.04	.01	.07	.03	.03	.05	.03	-.08	.12	.01	.10	.08	.11	-.02	.41	**.75**
CM3	.03	.05	.07	.09	.04	.18	.10	.00	-.01	.16	.01	.15	.06	.11	-.02	.52	**.92**

* = formative constructs, therefore loadings are not interpreted.
Bolded figures in each block indicate that the constructs are well-measured by their indicators.

Table 6.10 Loading and Cross-loading Matrix
Scenario 2 – Malaysia (Understating Other Incomes)

	INS	AFS	ISS	SNS	PBS	GF*	EF	HF	VF	RF*	PF	AF*	GK*	LK	TK*	CT*	CM
INS1	**.88**	.65	.50	.61	-.34	.21	.15	.05	.02	.07	.10	.16	.06	.01	.01	.15	.08
INS2	**.79**	.55	.40	.47	-.22	.15	.17	.02	.15	.13	.12	.11	.11	.07	.07	.19	.10
INS3R	**.77**	.55	.37	.66	-.47	.04	.06	-.06	.00	.01	.02	.03	-.01	-.01	-.04	-.04	-.00
AFS1	.62	**.90**	.44	.50	-.27	.16	.10	.11	.05	.06	.10	.11	.04	.01	.00	.11	.07
AFS2	.61	**.90**	.45	.50	-.29	.13	.12	.12	.04	.06	.08	.13	.06	.01	-.01	.11	.07
AFS3R	.57	**.70**	.34	.60	-.46	.03	.08	-.04	.01	.05	.08	.01	.05	.02	-.02	.00	-.01
ISS1	.47	.45	**.89**	.47	-.27	.17	.06	.22	.05	.04	.08	.08	-.02	-.05	.01	.11	-.01
ISS2R	.29	.26	**.58**	.32	-.43	-.01	.01	.05	-.06	-.06	-.06	-.04	-.06	-.11	-.04	-.05	-.07
SNS1R	.59	.50	.40	**.84**	-.49	.07	.06	.01	-.01	.03	-.02	.02	-.03	-.01	-.05	-.03	-.07
SNS2	.62	.55	.51	**.79**	-.25	.18	.11	.15	.06	.16	.04	.12	.04	.05	.07	.15	.01
SNS3R	.52	.46	.36	**.78**	-.46	-.02	-.01	-.03	-.05	-.01	-.08	-.07	-.08	-.03	-.08	-.07	-.06
PBS2	-.38	-.33	-.29	-.45	**.78**	-.08	-.02	.02	.04	.03	.03	-.00	.02	.12	.03	.00	.03
PBS3	-.27	-.23	-.34	-.32	**.77**	-.06	-.01	-.07	.05	.09	.06	-.02	.03	.10	.06	-.00	.06
PBS4	-.37	-.35	-.39	-.41	**.89**	-.08	-.03	-.01	.06	.08	.04	.01	.06	.08	.07	.08	.08
PBS5	-.37	-.38	-.35	-.42	**.83**	-.06	-.05	-.02	.09	.10	.05	.01	.06	.06	.13	.06	.10
GF1	.17	.17	.12	.11	-.10	**.86**	.41	.16	.05	.04	.26	.38	.23	.06	.03	.21	.12
GF2	.07	.02	.09	.03	-.02	**.72**	.28	.21	.13	.10	.36	.32	.18	.08	.20	.29	.13
GF3R	-.02	.02	-.03	-.01	-.00	**-.11**	-.04	-.11	-.11	-.07	.01	.02	-.00	-.02	-.04	-.06	-.01
EF1	.14	.12	.04	.05	-.05	.54	**.79**	.11	.05	.07	.31	.39	.18	.09	.03	.20	.11
EF2	.07	.05	.03	.06	.01	.05	**.65**	.14	.48	.17	.25	.14	.15	.19	.20	.13	.05
HF1	.01	.05	.16	.05	-.02	.16	.11	**.81**	.06	.02	.10	.16	.05	.02	.07	.09	-.01
HF2	-.01	.04	.13	.02	-.01	.19	.15	**.81**	.11	.04	.10	.15	.10	.01	.08	.10	-.05
HF3	.01	.09	.19	.06	-.02	.23	.15	**.81**	.14	.08	.11	.18	.10	.04	.05	.12	.05
VF1	.08	.05	.02	-.01	.04	.13	.22	.13	**.81**	.15	.25	.16	.25	.16	.24	.16	.13
VF2	.02	.01	-.01	.01	.08	.08	.33	.08	**.82**	.17	.28	.09	.27	.14	.27	.12	.04
RF2	.05	.04	-.01	.06	.10	.05	.13	.02	.21	**.95**	.27	.13	.32	.35	.29	.17	.13
RF3	.12	.09	.06	.09	.00	.15	.13	.12	.05	**.53**	.12	.24	.11	.17	.10	.22	.16
PF1	.09	.08	-.00	-.03	.05	.36	.27	.05	.19	.20	**.84**	.27	.33	.24	.25	.26	.22
PF3	.05	.08	.06	.01	.04	.20	.35	.17	.34	.24	**.72**	.29	.23	.16	.21	.23	.12
AF1	.06	.01	.07	.04	.06	.25	.24	.13	.14	.11	.24	**.49**	.10	.14	.10	.16	.17
AF2	.12	.11	.03	.02	-.02	.39	.35	.18	.12	.18	.31	**.95**	.28	.19	.12	.31	.24
GK1	.06	.06	-.07	-.03	.06	.21	.22	.05	.33	.32	.35	.27	**.96**	.40	.33	.34	.22
GK2R	-.02	-.02	-.10	-.02	.00	-.23	-.08	-.20	-.02	-.07	-.11	-.13	**-.39**	-.14	-.18	-.20	-.10
LK1	-.02	-.02	-.04	-.02	.04	.06	.15	.06	.08	.19	.15	.12	.27	**.74**	.14	.13	.10
LK2	.04	.03	-.10	.02	.12	.08	.16	.01	.20	.37	.27	.22	.40	**.92**	.32	.26	.24
TK1	.06	.02	-.00	.01	.05	.11	.15	.03	.29	.29	.30	.14	.35	.32	**.95**	.21	.21
TK2	-.14	-.09	-.08	-.14	.14	.04	.00	.13	.18	.11	.11	.06	.14	.06	**.48**	.10	.09
TK4R	.05	.04	-.09	.03	-.06	-.08	-.02	-.19	-.01	.03	.03	.00	.00	.05	**-.06**	-.01	.29
CT2R	.03	-.00	-.07	-.01	-.04	.02	.02	-.12	-.01	-.00	-.01	.05	.00	-.01	-.05	**.01**	.40
CT3	.12	.09	.03	.01	.03	.29	.22	.07	.16	.22	.31	.32	.36	.25	.20	**.95**	.56
CT4R	-.01	.02	-.14	-.02	.01	-.04	-.01	-.19	.02	.08	.06	.00	.02	.09	.01	**.01**	.38
CM1	.08	.08	-.03	-.03	.07	.14	.10	-.01	.14	.15	.23	.26	.24	.22	.20	.38	**.92**
CM3	.04	.01	-.05	-.07	.08	.13	.10	.02	.03	.13	.16	.22	.16	.17	.11	.42	**.86**

* = formative constructs, therefore loadings are not interpreted.
Bolded figures in each block indicate that the constructs are well-measured by their indicators.

Another approach to assess discriminant validity is by comparing the square root of AVEs with the correlations among the constructs (Fornell & Larcker, 1981). As a rule of thumb, the square root of AVEs of each construct should be larger than the correlation of the specific construct with any other constructs in the model (Fornell & Larcker, 1981; Gefen et al., 2000; Hair et al., 2006).[96] The correlation matrixes in Tables 6.11 to 6.14 reveal that the square roots of AVE are greater than the corresponding correlations in the scenarios for both New Zealand and Malaysian data. This suggests that each indicator did not measure the different concepts, and therefore confirmed the discriminant validity.

Table 6.11 Correlation of Latent Constructs and the Square Root of AVE Scenario 1 - New Zealand (Overstating Business Expenses)

	IND	AFD	ISD	SND	PBD	GF#	EF	HF	VF	RF#	PF	AF#	GK#	LK	TK#	CT#	CM
IND	**0.83***																
AFD	0..67	**0.86**															
ISD	0.08	0.15	**0.74**														
SND	0.48	0.50	0.17	**0.83**													
PBD	-0.35	-0.47	-0.21	-0.34	**0.77**												
GF	0.09	0.03	-0.11	0.04	-0.09	**0.60**											
EF	-0.07	-0.02	0.00	-0.04	0.05	0.39	**0.77**										
HF	0.10	0.11	-0.06	0.13	-0.14	-0.01	0.02	**0.78**									
VF	-0.02	-0.03	-0.06	-0.03	-0.02	0.26	0.50	0.09	**0.87**								
RF	0.19	0.15	-0.13	0.17	-0.01	0.00	0.12	0.22	0.16	**0.68**							
PF	0.11	0.05	0.11	0.05	-0.04	0.10	0.14	0.24	0.12	0.05	**0.83**						
AF	-0.11	-0.02	-0.11	-0.11	0.21	0.03	0.27	-0.02	0.05	-0.12	0.02	**0.77**					
GK	0.05	0.00	-0.16	0.05	0.00	0.20	0.29	0.15	0.25	0.13	0.15	0.18	**0.70**				
LK	0.10	0.01	-0.20	0.06	0.08	0.06	0.08	0.20	0.07	0.01	0.08	0.21	0.30	**0.80**			
TK	0.14	0.00	-0.05	0.19	0.09	0.17	0.08	-0.05	0.10	0.20	-0.18	0.00	-0.01	0.01	**0.62**		
CT	0.02	0.09	0.02	0.09	0.03	0.31	0.31	0.06	0.09	-0.07	0.05	0.32	0.16	0.04	0.29	**0.70**	
CM	0.08	0.11	0.02	0.15	0.02	0.16	0.10	0.02	-0.03	-0.06	0.02	0.15	0.09	0.13	0.18	0.56	**0.83**

* Diagonal elements are square root of average variance extracted.
# Formative constructs.

[96] There are no guidelines about how much larger the square root of AVE should be (Gefen & Straub, 2005).

Table 6.12 Correlation of Latent Constructs and the Square Root of AVE Scenario 1 – Malaysia (Overstating Business Expenses)

	IND	AFD	AID	SND	PBD	GF#	EF	HF	VF	RF#	PF	AF#	GK#	LK	TK#	CT#	CM
IND	**0.78***																
AFD	0.64	**0.79**															
ISD	0.11	0.16	**0.80**														
SND	0.55	0.50	0.32	**0.74**													
PBD	-0.16	-0.22	-0.45	-0.37	**0.81**												
GF	-0.01	0.02	0.02	0.01	0.05	**0.65**											
EF	0.09	0.09	-0.02	0.09	0.07	0.32	**0.72**										
HF	-0.16	-0.13	-0.01	-0.19	0.12	0.25	0.17	**0.81**									
VF	0.11	0.10	-0.01	0.10	0.09	0.14	0.44	0.12	**0.82**								
RF	0.16	0.17	-0.02	0.19	0.12	0.12	0.24	0.05	0.34	**0.75**							
PF	0.15	0.20	0.05	0.12	0.09	0.40	0.39	0.13	0.35	0.33	**0.78**						
AF	0.08	0.10	-0.07	0.03	0.11	0.40	0.33	0.21	0.16	0.22	0.36	**0.75**					
GK	0.15	0.17	-0.06	0.12	0.17	0.26	0.29	0.13	0.36	0.38	0.40	0.33	**0.73**				
LK	0.16	0.17	-0.04	0.08	0.18	0.12	0.24	0.04	0.23	0.41	0.31	0.23	0.48	**0.84**			
TK	0.11	0.14	-0.08	0.08	0.19	0.17	0.22	0.10	0.37	0.37	0.34	0.19	0.42	0.38	**0.61**		
CT	0.17	0.13	-0.09	0.09	0.17	0.33	0.22	0.12	0.17	0.24	0.34	0.33	0.39	0.30	0.27	**0.54**	
CM	0.16	0.15	-0.02	0.12	0.10	0.17	0.13	-0.01	0.13	0.21	0.26	0.28	0.27	0.28	0.22	0.44	**0.89**

* Diagonal elements are square root of average variance extracted.
# Formative constructs.

Table 6.13 Correlation of Latent Constructs and the Square Root of AVE Scenario 2 - New Zealand (Understating Other Incomes)

	INS	AFS	ISS	SNS	PBS	GF#	EF	HF	VF	RF#	PF	AF#	GK#	LK	TK#	CT#	CM
INS	**0.87***																
AFS	0.77	**0.84**															
ISS	0.40	0.34	**0.76**														
SNS	0.73	0.63	0.32	**0.86**													
PBS	-0.53	-0.48	-0.46	-0.43	**0.82**												
GF	0.04	0.01	-0.07	0.01	0.06	**0.61**											
EF	0.12	0.06	0.01	0.09	-0.01	0.39	**0.77**										
HF	0.01	-0.01	-0.08	0.08	-0.04	-0.05	0.00	**0.77**									
VF	0.07	-0.02	-0.04	0.02	-0.03	0.27	0.52	0.11	**0.87**								
RF	0.06	0.08	-0.01	0.04	0.09	0.16	0.28	0.13	0.19	**0.72**							
PF	0.05	0.05	-0.01	0.05	-0.02	0.04	0.09	0.27	0.16	0.15	**0.82**						
AF	0.08	-0.01	-0.11	0.01	0.09	0.05	0.24	0.02	0.05	0.20	-0.03	**0.77**					
GK	0.08	0.03	-0.07	0.01	-0.04	0.19	0.30	0.21	0.30	0.27	0.21	0.18	**0.70**				
LK	0.00	-0.04	-0.30	-0.00	0.11	0.04	0.07	0.21	0.11	0.16	0.12	0.19	0.26	**0.79**			
TK	-0.02	0.03	-0.02	-0.01	-0.07	-0.04	-0.06	0.12	-0.07	0.10	0.29	0.05	0.16	0.18	**0.63**		
CT	0.25	0.16	0.08	0.20	-0.02	0.28	0.26	0.01	0.07	0.20	-0.02	0.28	0.14	0.02	-0.08	**0.70**	
CM	0.06	0.08	-0.01	0.08	0.04	0.11	0.07	0.04	-0.04	0.15	0.01	0.12	0.07	0.11	-0.04	0.51	**0.84**

* Diagonal elements are square root of average variance extracted.
# Formative constructs.

Table 6.14 Correlation of Latent Constructs and the Square Root of AVE Scenario 2 – Malaysia (Understating Other Incomes)

	INS	AFS	ISS	SNS	PBS	GF#	EF	HF	VF	RF#	PF	AF#	GK#	LK	TK#	CT#	CM
INS	**0.81***																
AFS	0.68	**0.84**															
ISS	0.51	0.47	**0.75**														
SNS	0.65	0.54	0.50	**0.80**													
PBS	-0.33	-0.28	-0.34	-0.43	**0.82**												
GF	0.20	0.15	0.15	0.08	-0.07	**0.65**											
EF	0.16	0.12	0.06	0.03	-0.04	0.44	**0.72**										
HF	0.03	0.07	0.19	0.04	-0.01	0.23	0.17	**0.81**									
VF	0.04	0.02	-0.01	-0.03	0.09	0.10	0.32	0.12	**0.82**								
RF	0.10	0.08	0.01	0.06	0.13	0.12	0.21	0.06	0.29	**0.77**							
PF	0.12	0.10	0.04	-0.03	0.06	0.37	0.40	0.13	0.35	0.32	**0.78**						
AF	0.14	0.11	0.05	-0.01	0.02	0.42	0.39	0.21	0.16	0.23	0.36	**0.75**					
GK	0.08	0.09	-0.03	-0.03	0.09	0.27	0.29	0.13	0.36	0.36	0.40	0.33	**0.73**				
LK	0.03	0.04	-0.09	-0.01	0.14	0.11	0.21	0.03	0.24	0.42	0.32	0.24	0.49	**0.84**			
TK	0.04	0.01	-0.04	-0.02	0.14	0.12	0.17	0.09	0.37	0.37	0.34	0.20	0.42	0.41	**0.62**		
CT	0.16	0.13	0.06	0.01	0.08	0.30	0.24	0.11	0.18	0.26	0.34	0.34	0.39	0.31	0.27	**0.55**	
CM	0.07	0.06	-0.05	-0.09	0.12	0.16	0.14	-0.01	0.13	0.21	0.26	0.28	0.27	0.30	0.24	0.48	**0.89**

* Diagonal elements are square root of average variance extracted.
# Formative constructs.

Overall, the construct validity tests of the measures resulted in the removal of 12 items (out of 70 items) consisting of three formative items and nine reflective items. This percentage of deletion is considered conservative (Barclay et al., 1995; Jackson, 2008), particularly when it is proven that their absence has improved the validity of the measures. At this point it can be concluded that the measures used in this study met both content and construct validity.

6.3.3 Reliability

Similar to the validity tests of the constructs, reliability tests of the measures also require different approaches for formative and reflective

constructs. Formative constructs involve multicollinearity tests, while reliability of the reflective constructs depends on the composite reliability and the AVE.

6.3.3.1 Formative Constructs

To determine the reliability of the formative constructs multicollinearity of the construct indicators was examined. No presence of multicollinearity was expected to confirm the reliability of the measures as high multicollinearity suggests an unstable model (Petter et al., 2007). For this purpose, a variance inflation factor (VIF) and a condition index were used as the reference, with statistics of greater than 3.3 (Diamantopoulos & Siguaw, 2006) and 30, respectively, representing a multicollinearity problem. In addition to this, the tolerance values were also checked to measure directly the multicollinearity problem (Hair et al., 2006). Based on the formula, the tolerance values should not fall to 0.3 and below to ensure the VIF not exceeding 3.3.[97] The results in Tables 6.15 to 6.18 reveal that the VIF, condition index and tolerance values were below the threshold levels, which suggests there is no multicollinearity problem, thereby confirming the reliability of the measures.

Table 6.15 Variance Inflation Factor (VIF) and Condition Index Scenario 1 – New Zealand (Overstating Business Expenses)

Item	Un-standardised Coefficients		Standardised Coefficients			Collinearity Statistics		Condition Index
	B	Std. Error	Beta	*t*-value	Sig.	Tolerance	VIF	
Constant	0.000	.066		0.002	0.999			1.000
GF	0.073	.071	0.073	1.024	0.307	0.860	1.162	1.174
RF	0.159	.070	0.159	2.278	0.024	0.897	1.115	1.289
AF	-0.113	0.72	-0.113	-1.571	0.118	0.850	1.177	1.313
GK	0.043	0.70	0.043	0.615	0.539	0.887	1.127	1.385
TK	0.094	0.72	0.094	1.303	0.194	0.839	1.193	1.717
CT	0.012	0.78	0.012	0.148	0.882	0.726	1.377	1.849

Table 6.16 Variance Inflation Factor (VIF) and Condition Index Scenario 1 – Malaysia (Overstating Business Expenses)

Item	Un-standardised Coefficients		Standardised Coefficients			Collinearity Statistics		Condition Index
	B	Std. Error	Beta	*t*-value	Sig.	Tolerance	VIF	
Constant	0.000	0.034		0.001	0.999			1.000
GF	-0.103	0.038	-0.103	-2.711	0.007	0.783	1.277	1.457
RF	0.117	0.036	0.117	3.223	0.001	0.848	1.179	1.527
AF	0.004	0.038	0.004	0.103	0.918	0.773	1.294	1.791
GK	0.067	0.039	0.067	1.696	0.090	0.727	1.375	1.837
TK	-0.014	0.037	-0.014	-0.389	0.697	0.826	1.210	1.977
CT	0.132	0.038	0.132	3.453	0.001	0.768	1.303	2.047

Table 6.17 Variance Inflation Factor (VIF) and Condition Index Scenario 2 – New Zealand (Understating Other Incomes)

Item	Un-standardised Coefficients		Standardised Coefficients			Collinearity Statistics		Condition Index
	B	Std. Error	Beta	*t*-value	Sig.	Tolerance	VIF	
Constant	0.000	0.066		0.003	0.998			1.000
GF	-0.004	0.071	-0.004	-0.053	0.958	0.865	1.157	1.286
RF	-0.037	0.072	-0.037	-0.516	0.607	0.847	1.181	1.375
AF	0.032	0.073	0.032	0.441	0.660	0.834	1.200	1.422
GK	0.026	0.071	0.026	0.369	0.713	0.884	1.131	1.565
TK	-0.007	0.068	-0.007	-0.098	0.922	0.956	1.046	1.634
CT	0.245	0.075	0.245	3.254	0.001	0.781	1.281	1.851

Table 6.18 Variance Inflation Factor (VIF) and Condition Index Scenario 2 – Malaysia (Understating Other Incomes)

Item	Un-standardised Coefficients		Standardised Coefficients			Collinearity Statistics		Condition Index
	B	Std. Error	Beta	*t*-value	Sig.	Tolerance	VIF	
Constant	0.000	0.034		0.000	1.000			1.000
GF	0.127	0.038	0.127	3.309	0.001	0.775	1.290	1.455
RF	0.065	0.037	0.065	1.763	0.078	0.844	1.185	1.531
AF	0.049	0.039	0.049	1.271	0.204	0.751	1.332	1.798
GK	-0.013	0.040	-0.013	-0.335	0.738	0.727	1.376	1.845
TK	-0.039	0.037	-0.039	-1.054	0.292	0.832	1.202	2.006
CT	0.068	0.038	0.068	1.775	0.076	0.772	1.296	2.054

[97] Tolerance values are calculated based on the following formula: 1/VIF (Hair et al., 2006).

6.3.3.2 Reflective Constructs

For reflective constructs the reliability of the measures are normally illustrated by high Cronbach alpha or internal consistency scores (Petter et al., 2007). In this study, internal consistency scores, also known as composite reliability, generated by the PLS bootstrapping analysis were used as this was considered to be more accurate (Brown & Chin, 2004).[98] Referring to Table 6.19, the figures suggest that all constructs met the minimum value of 0.7 (Chin, 1998a), except for exchange fairness (in the Malaysian sample) with a slightly lower value at 0.690. Other than that most constructs had an internal consistency of above 0.8.

Table 6.19 Internal Consistency of the Constructs

Construct	Composite Reliability			
	Scenario 1		Scenario 2	
	New Zealand	Malaysia	New Zealand	Malaysia
Exchange fairness (EF)	0.740	0.690	0.745	0.689
Horizontal fairness (HF)	0.827	0.855	0.812	0.854
Vertical fairness (VF)	0.864	0.805	0.865	0.805
Personal fairness (PF)	0.822	0.761	0.807	0.762
Legal knowledge (LK)	0.780	0.831	0.778	0.829
Compliance complexity (CM)	0.820	0.887	0.830	0.888
Intention (IND/INS)	0.872	0.829	0.904	0.859
Affective attitude (AFD/AFS)	0.895	0.834	0.880	0.879
Instrumental attitude (ISD/ISS)	0.708	0.787	0.743	0.717
Subjective norms (SND/SNS)	0.876	0.792	0.898	0.850
Perceived behavioural control (PBD/PBS)	0.854	0.885	0.895	0.893

In addition to composite reliability the AVE scales were also used to determine the reliability of the measures. The scales should exceed 0.5 (Fornell & Larcker, 1981) indicating, "50 percent or more variance of the indicators should be accounted for" (Chin, 1998b, p. 321). From Table

[98] This is on the basis that the measure is not influenced by the number of indicators (Hanlon, 2001).

6.20 it can be seen that all the scales performed acceptably on this standard and thus confirm the reliability of the measures.

Table 6.20 Average Variance Extracted of the Constructs

Construct	Average Variance Extracted (AVE)			
	Scenario 1		Scenario 2	
	New Zealand	Malaysia	New Zealand	Malaysia
Exchange fairness (EF)	0.600	0.528	0.603	0.528
Horizontal fairness (HF)	0.616	0.662	0.595	0.661
Vertical fairness (VF)	0.761	0.674	0.762	0.674
Personal fairness (PF)	0.699	0.616	0.681	0.617
Legal knowledge (LK)	0.640	0.713	0.639	0.710
Compliance complexity (CM)	0.699	0.798	0.711	0.798
Intention (IND/INS)	0.694	0.618	0.760	0.670
Affective attitude (AFD/AFS)	0.740	0.631	0.710	0.711
Instrumental attitude (ISD/ISS)	0.552	0.648	0.591	0.570
Subjective norms (SND/SNS)	0.702	0.559	0.747	0.654
Perceived behavioural control (PBD/PBS)	0.596	0.658	0.682	0.676

At this stage the evaluation of the first order measurement model confirms that fairness perceptions are multi-dimensional and provides support to previous studies (Azmi & Perumal, 2008; Bobek, 1997; Gerbing, 1988; Richardson, 2005a; 2005b; 2006b; Tan, 1998). In particular, the results suggest that taxpayers in both New Zealand and Malaysia perceived fairness perceptions in seven dimensions namely: general fairness; exchange fairness; horizontal fairness; vertical fairness; retributive fairness; personal fairness; and administrative fairness. Thus, Hypothesis 5, which states *'New Zealand and Malaysian taxpayers perceive fairness of their income tax systems as being multi-dimensional'*, is accepted.

6.4 Evaluation of the Measurement Model – Second Order Factor Model

At this point relevant tests to establish the validity and reliability of all indicators in the measurement model at the first order level have been satisfactorily performed. Conceptually the researcher may proceed with the analysis of the structural model to test the hypotheses. However, as indicated in Chapter 4, this study defines some of the constructs at a more abstract level, which requires the researcher to present the model at the second order factor. To do this, the researcher is expected to repeat the validity and reliability tests on the second order factor model (Chin, 1998a). However, at this stage, the model is estimated using the component scores instead of the raw item scores. The component scores are the weighted average scores of the items measuring each component, with the weights estimated in the first order factor model. When the validity and reliability of the constructs in the second order factor model are established then the hypotheses testing through structural model can be pursued.

In this study, three of the eight constructs in the full model were operationalised as second order factors, measured with twelve first order components. The constructs are fairness measured with seven components, and tax knowledge and tax complexity measured with three and two components, respectively. All these constructs are modelled as formative. To provide evidence of construct validity, Tables 6.21 and 6.22

summarised the path weights of the measures forming the construct, the observed *t*-values from the bootstrap re-sampling procedure and the significance level of measure weights for two scenarios under study in both New Zealand and Malaysia.

As shown in Table 6.21 (relating to the overstating business expenses scenario), general fairness (GF), horizontal fairness (HF) and administrative fairness (AF), were significant measures of fairness perceptions in New Zealand environment. In addition to this, the PLS weights also indicate that taxpayers' perceptions on administrative aspects contributed most to the fairness perceptions, followed by general fairness and horizontal fairness. In Malaysia, general fairness (GF) and exchange fairness (EF) were the only dimensions, which were not significant. Accordingly, retributive fairness had the highest weight, followed by personal fairness and vertical fairness. In terms of tax knowledge, all measures were significant in both environments, with general knowledge being the most important, followed by technical knowledge and legal knowledge. For tax complexity respondents in both countries agreed that content complexity gives more weight to their perceptions. Even though Malaysian respondents considered compliance complexity as moderately important in forming their perceptions New Zealand respondents did not perceive compliance complexity as an important measure of tax complexity.

Table 6.21 Formative Constructs, Indicators and Weights Scenario 1 (Overstating Business Expenses)

Construct and Items	New Zealand PLS Weights	New Zealand *t*-Statistics	New Zealand Significance Level	Malaysia PLS Weights	Malaysia *t*-Statistics	Malaysia Significance Level
Fairness						
GF	0.5772	3.0130	0.005	0.0702	1.0163	not sig.
EF	0.1558	0.6569	not sig.	0.0107	0.1667	not sig.
HF	0.2841	2.1423	0.025	-0.1878	2.5596	0.010
VF	0.0828	0.5163	not sig.	0.3065	4.4674	0.005
RF	0.2234	0.7856	not sig.	0.4643	6.7152	0.005
PF	-0.1108	0.5904	not sig.	0.4309	5.6310	0.005
AF	0.5827	3.0929	0.005	0.2645	3.8068	0.005
Tax Knowledge						
GK	0.7225	3.5736	0.005	0.5466	9.1649	0.005
LK	0.3586	1.9273	0.050	0.3543	6.1036	0.005
TK	0.4482	1.6350	0.100	0.4134	6.7023	0.005
Tax Complexity						
CT	1.0838	4.4951	0.005	0.7981	10.5892	0.005
CM	-0.1650	0.4999	not sig.	0.3567	3.5098	0.005

In the understating income scenario, from seven dimensions of fairness, vertical fairness (VF) and personal fairness (PF) were non-significant measures of fairness perceptions in New Zealand; while exchange fairness (EF) and horizontal fairness (HF) were not significant in Malaysia. In terms of rank order (following their weights), the results were comparable to Scenario 1. For tax knowledge, however, similar results to Scenario 1 were reported in the Malaysian sample only. In New Zealand, while general knowledge remains as a significant measure of tax knowledge, technical knowledge, however, was considered to be non-significant. On the other hand taxpayers perceive legal knowledge as substantially forming their perceptions on tax knowledge. In terms of tax complexity, the results were comparable to Scenario 1, with highest weight placed on content complexity.

All measures of the fairness perceptions, tax knowledge and tax complexity, both significant and non-significant, were retained for estimating the PLS model so as to preserve content validity (Bollen & Lennox, 1991; Roberts & Thatcher, 2009).

Table 6.22 Formative Constructs, Indicators and Weights Scenario 2 (Understating Other Incomes)

Construct and Items	New Zealand			Malaysia		
	PLS Weights	*t*-Statistics	Significance Level	PLS Weights	*t*-Statistics	Significance Level
Fairness						
GF	0.4216	2.5185	0.010	0.2360	3.1674	0.005
EF	0.2967	1.7455	0.050	0.0237	0.3453	not sig.
HF	0.2764	2.2642	0.025	0.0189	0.2903	not sig.
VF	0.0095	0.0573	not sig.	0.2683	3.7280	0.005
RF	0.2017	1.5250	0.100	0.4280	6.0068	0.005
PF	0.0225	0.1396	not sig.	0.3330	5.0359	0.005
AF	0.5130	4.5815	0.005	0.2753	3.9466	0.005
Tax Knowledge						
GK	0.7904	5.2486	0.005	0.5905	8.8228	0.005
LK	0.4378	2.4534	0.010	0.3267	5.1795	0.005
TK	-0.0592	0.2470	not sig.	0.3845	5.4932	0.005
Tax Complexity						
CT	1.0832	8.0523	0.005	0.8202	10.8699	0.005
CM	-0.1626	0.7243	not sig.	0.3112	3.0162	0.005

In terms of reliability of the measures, Tables 6.23 to 6.26 suggest no presence of multicollinearity problem, (with reference to a variance inflation factor (VIF) of less than 3.3, a condition index of not exceeding 30, and tolerance values of more than 0.3).

Table 6.23 Variance Inflation Factor (VIF) and Condition Index Scenario 1 – New Zealand (Overstating Business Expenses)

Item	Un-standardised Coefficients		Standardised Coefficients			Collinearity Statistics		Condition Index
	B	Std. Error	Beta	*t*	Sig.	Tolerance	VIF	
Constant	0.000	0.067		-0.002	0.998			1.000
FAIR	-0.020	0.080	-0.020	-0.249	0.804	0.717	1.394	1.319
KNO	0.158	0.074	0.158	2.120	0.035	0.821	1.218	1.530
CLX	-0.023	0.075	-0.023	-0.313	0.755	0.808	1.238	1.831

Table 6.24 Variance Inflation Factor (VIF) and Condition Index
Scenario 1 – Malaysia (Overstating Business Expenses)

Item	Un-standardised Coefficients		Standardised Coefficients			Collinearity Statistics		Condition Index
	B	Std. Error	Beta	*t*	Sig.	Tolerance	VIF	
Constant	0.000	0.033		-0.001	0.999			1.000
FAIR	0.164	0.042	0.164	3.932	0.000	0.646	1.549	1.385
KNO	0.010	0.042	0.010	0.251	0.802	0.640	1.563	1.718
CLX	0.101	0.037	0.101	2.702	0.007	0.795	1.259	2.104

Table 6.25 Variance Inflation Factor (VIF) and Condition Index
Scenario 2 – New Zealand (Understating Other Incomes)

Item	Un-standardised Coefficients		Standardised Coefficients			Collinearity Statistics		Condition Index
	B	Std. Error	Beta	*t*	Sig.	Tolerance	VIF	
Constant	0.000	0.066		0.001	1.000			1.000
FAIR	0.008	0.081	0.008	0.093	0.926	0.664	1.506	1.300
KNO	0.013	0.072	0.013	0.184	0.854	0.834	1.199	1.397
CLX	0.258	0.075	0.258	3.462	0.001	0.778	1.285	1.946

Table 6.26 Variance Inflation Factor (VIF) and Condition Index
Scenario 2 – Malaysia (Understating Other Incomes)

Item	Un-standardised Coefficients		Standardised Coefficients			Collinearity Statistics		Condition Index
	B	Std. Error	Beta	*t*	Sig.	Tolerance	VIF	
Constant	0.000	0.034		0.000	1.000			1.000
FAIR	0.177	0.042	0.177	4.170	0.000	0.631	1.584	1.393
KNO	-0.079	0.042	-0.079	-1.901	0.058	0.652	1.534	1.766
CLX	0.080	0.038	0.080	2.070	0.039	0.770	1.298	2.111

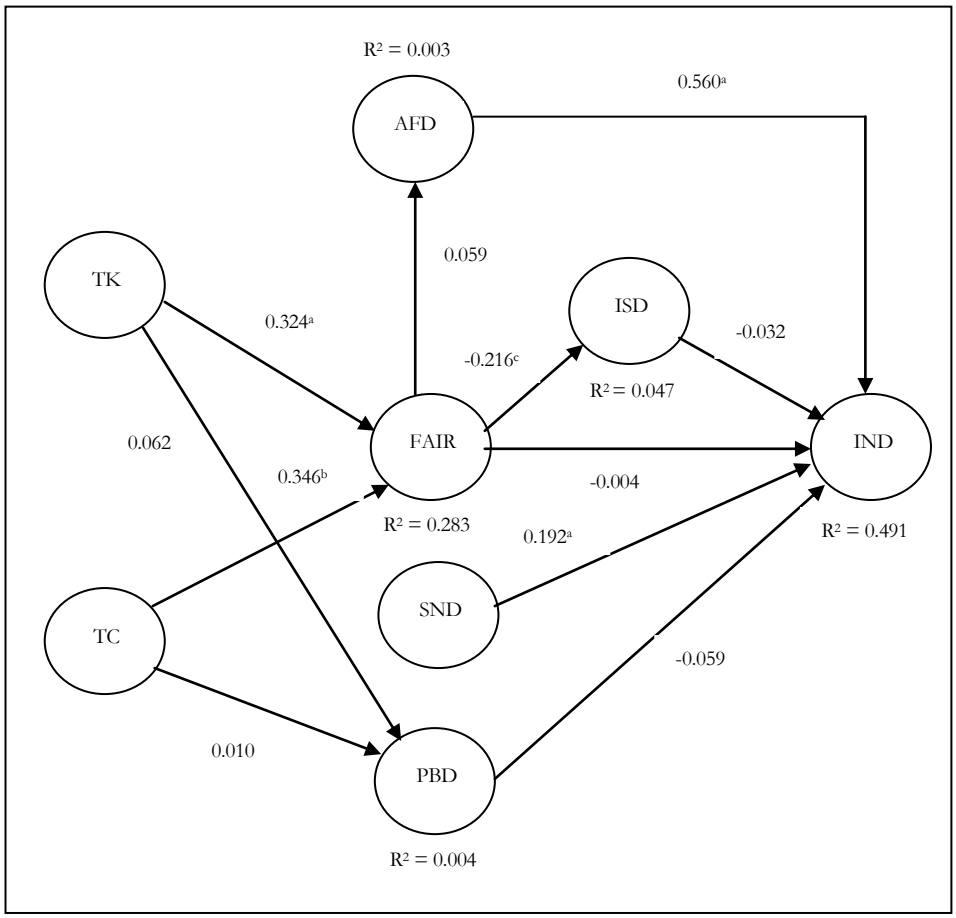
The evaluation of the measurement model (both first order factor and second order factor) implies that the measures used in this study work appropriately in both the New Zealand and Malaysian environments. Thus the next step is to test the explanatory power of the entire models in explaining tax compliance behaviour.

6.5 Results from the Structural Model

This section provides the PLS estimates of the Structural Model. The Structural Model demonstrates the extent of explained and unexplained

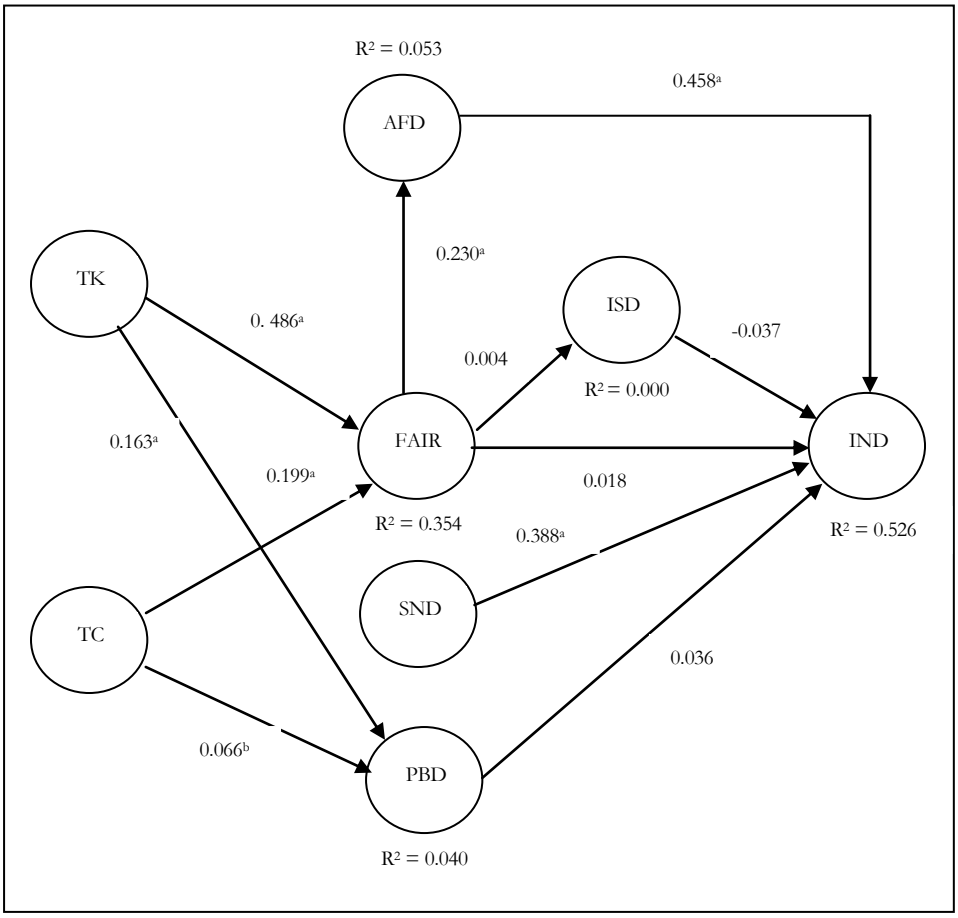
variances and specifies the relationship among the constructs. These can be assessed with reference to the R-squares (R^2) and the path coefficients generated in PLS-Graph. Figures 6.1 to 6.4 below provide an overview result of the Structural Models, while the full PLS graphic outputs are presented in Appendix 13. The values beneath the circles are the R^2, which are concisely summarised in Table 6.27, and are discussed in the following section of this chapter.

Figure 6.1 Structural Model Results
Scenario 1 – New Zealand (Overstating Business Expenses)



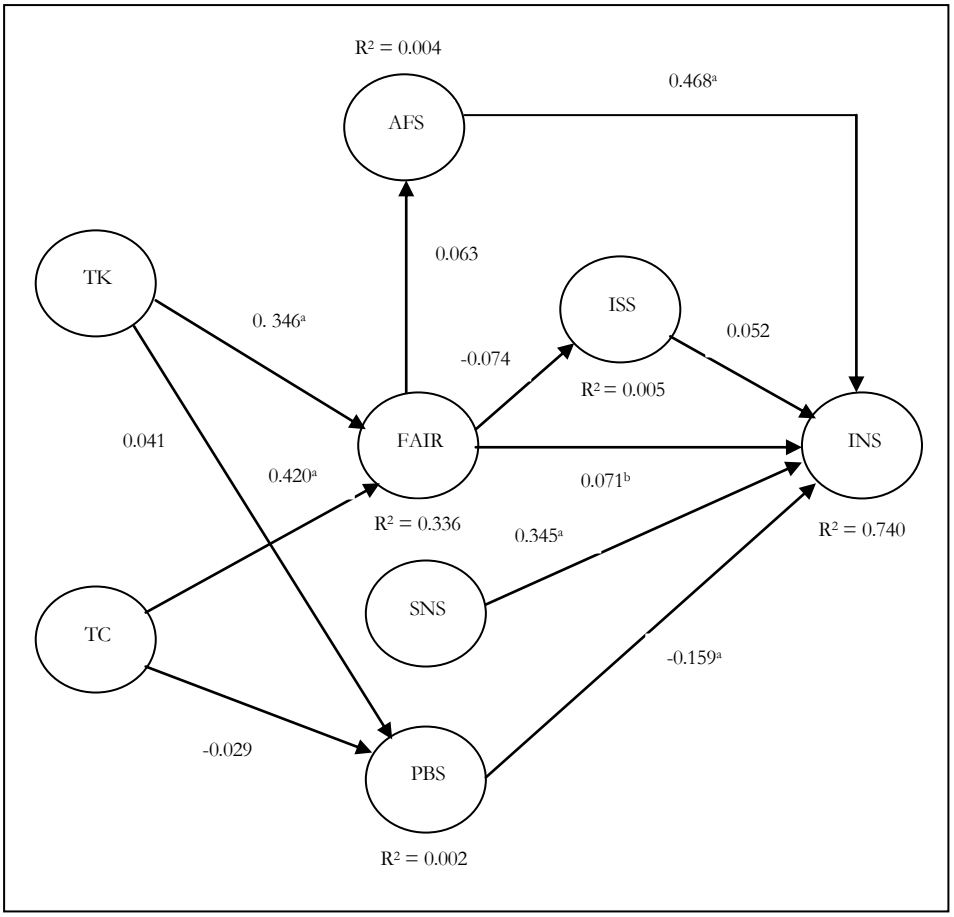
Note:
TK – Tax knowledge
TC – Tax complexity
AFD – Affective attitude
FAIR – Fairness perceptions
ISD – Instrumental attitude
SND – Subjective norms
PBD – Perceived behavioural control
IND – Intention to comply
[a] significant at the 0.005 level
[b] significant at the 0.01 level
[c] significant at the 0.05 level

Figure 6.2 Structural Model Results
Scenario 1 – Malaysia (Overstating Business Expenses)



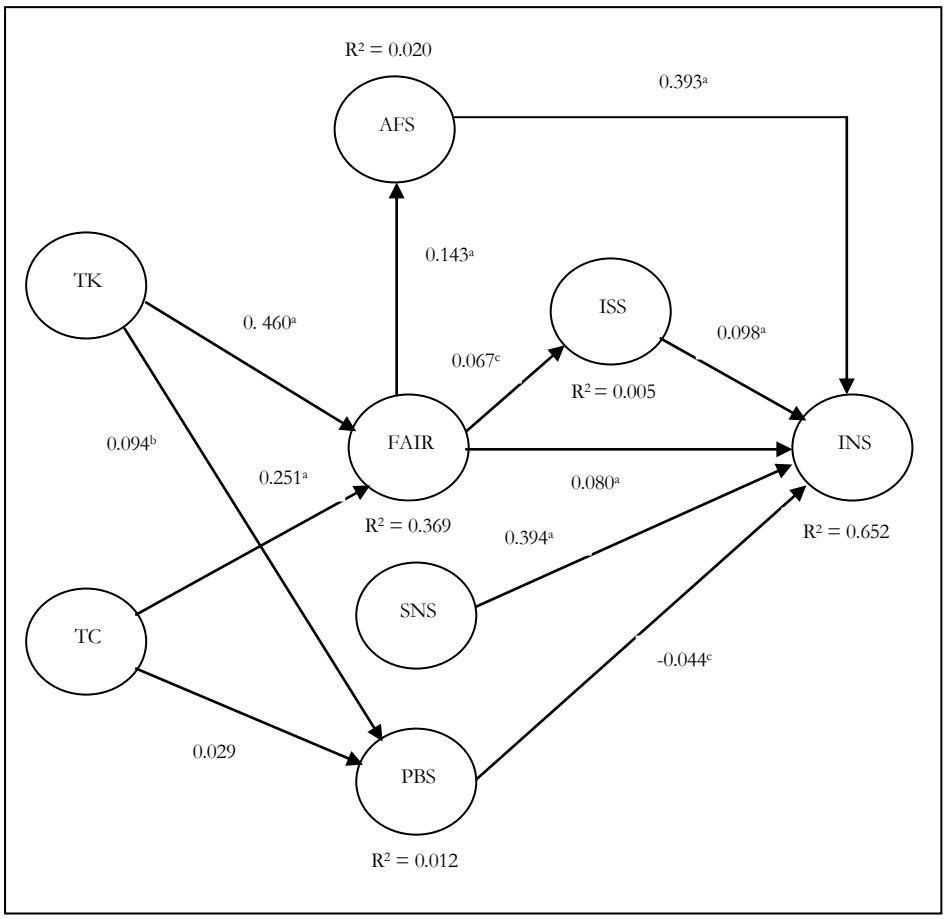
Note:
TK – Tax knowledge
TC – Tax complexity
AFD – Affective attitude
FAIR – Fairness perceptions
ISD – Instrumental attitude
SND – Subjective norms
PBD – Perceived behavioural control
IND – Intention to comply
[a] significant at the 0.005 level
[b] significant at the 0.1 level

Figure 6.3 Structural Model Results
Scenario 2 – New Zealand (Understating Other Income)



Note:
TK – Tax knowledge
TC – Tax complexity
AFS – Affective attitude
FAIR – Fairness perceptions
ISS – Instrumental attitude
SNS – Subjective norms
PBS – Perceived behavioural control
INS – Intention to comply
[a] significant at the 0.005 level
[b] significant at the 0.1 level

Figure 6.4 Structural Model Results
Scenario 2 – Malaysia (Understating Other Income)



Note:
TK – Tax knowledge
TC – Tax complexity
AFS – Affective attitude
FAIR – Fairness perceptions
ISS – Instrumental attitude
SNS – Subjective norms
PBS – Perceived behavioural control
INS – Intention to comply
[a] significant at the 0.005 level
[b] significant at the 0.05 level
[c] significant at the 0.1 level

6.5.1 R-squares

The R^2 value for the dependent construct is a measure used to assess the predictive power of the model. In other words it suggests to what extent the

independent constructs help to explain the dependent constructs. Likewise, it also provides the total variation in the dependent construct (by subtracting the R^2 values from 1), which cannot be explained by the independent constructs. In the case of perfect prediction, R^2 will be 1 and unexplained variation will be zero. Thus, the bigger the R^2, the more predictive power the model possesses.

6.5.1.1 R-squares of Intention to Comply

The R^2 values of 0.491 (New Zealand) and 0.526 (Malaysia) for the intention to comply (in Scenario 1) indicate that the model accounted for 49.1 and 52.6 percent, respectively, of the variance of the construct. The predictive power of the model is even greater in Scenario 2 with 74.0 and 65.2 percent in New Zealand and Malaysia, respectively. This suggests that there is a significant combined effect of independent constructs on the dependent construct in the operational model.

6.5.1.2 R-squares of Fairness Perceptions

The R^2 values of fairness perceptions indicate the extent tax knowledge and tax complexity help explain the constructs. However, the variances are not quite as strong as for intention to comply. Table 6.27 demonstrates that the New Zealand models explain 28 percent and 34 percent of the variance in fairness perceptions for Scenario 1 and 2, respectively. For the Malaysian

sample, the models better explained the variance with 35 percent and 37 percent for Scenario 1 and 2, respectively.

Table 6.27 R-Square Values

Construct	R^2			
	Scenario 1		Scenario 2	
	New Zealand	Malaysia	New Zealand	Malaysia
Fairness perceptions	0.283	0.354	0.336	0.369
Intention (IND/INS)	0.491	0.526	0.740	0.652
Affective attitude (AFD/AFS)	0.003	0.053	0.004	0.020
Instrumental attitude (ISD/ISS)	0.047	0.000	0.005	0.005
Perceived behavioural control (PBD/PBS)	0.004	0.040	0.002	0.012

6.5.1.3 R-squares of Affective Attitude

The R^2 of 0.003 (New Zealand) and 0.053 (Malaysia) in Scenario 1 for the affective attitude indicates that fairness perceptions accounted for only 3 to 5 percent of the variance of the construct, respectively. Almost similar results (with 0.004 and 0.020 for New Zealand and Malaysia, respectively) were documented in Scenario 2. These figures were extremely low and in fact do not meet the 10 percent rule suggested by Hanlon (2001) and Santosa et al. (2005). These results not only suggest that fairness perceptions had a very low influence on affective attitude but also indicate that there are other factors that may explain about 95 percent of the variance in affective attitude.

6.5.1.4 R-squares of Instrumental Attitude

Similar to affective attitude, the R^2 values of instrumental attitude were also low with 0.047 (New Zealand) and 0.000 (Malaysia) in Scenario 1, and 0.05 in Scenario 2 for both New Zealand and Malaysia. Again these

suggest that fairness perceptions account for less than 10 percent of the variance of the construct in both data samples.

6.5.1.5 R-squares of Perceived Behavioural Control

The R^2 of perceived behavioural control indicates the extent tax knowledge and tax complexity help explain the construct. From Table 6.27 it appears that the R^2 values in both scenarios of the environments under study were below 0.05, suggesting weak predictive power. In other words, the results demonstrate that even though tax knowledge and tax complexity may explain the perceived behavioural control, they are only able to do so at most for 4 percent of the construct.

6.5.2 Effect Size

As previously mentioned in Chapter 4, the effect size is investigated to assess the strength of the effect of a particular independent construct on the dependent construct (Chin, 1998b). To achieve this, five sub-models were generated for each scenario in both New Zealand and Malaysia. Results were then interpreted using the criteria set out by Cohen (1992), where f^2 = 0.02 as small effect; f^2 = 0.15 as medium effect and f^2 = 0.35 as large effect.

The effect size of each independent construct on the intention to comply is shown in Tables 6.28 to 6.31. In Scenario 1 for the New Zealand sample

(Table 6.28) two independent constructs had certain effects on intention to comply with tax obligations. In particular affective attitude with an effect size of 0.41 has a substantial influence on intention to comply. Likewise, the $R^2_{excluded}$ also dropped when subjective norms were omitted from the model, resulting in an effect size of 0.05, implying a small effect from subjective norms to intention to comply. However, with reference to the f^2, instrumental attitude, perceived behavioural control and fairness perceptions seemed to have no impact on intention to comply.

Table 6.28 Effect Size in the Intention to Comply
Scenario 1 – New Zealand (Overstating Business Expenses)

Construct Excluded	R^2 Excluded	f^2	Degree of Effect
Affective attitude	0.281	0.41	Large effect
Instrumental attitude	0.490	0.00	No effect
Subjective norms	0.465	0.05	Small effect
Perceived behavioural control	0.488	0.01	No effect
Fairness perceptions	0.490	0.00	No effect

Almost similar results were found in the Malaysian environment for Scenario 1 where only affective attitude and subjective norms had sizeable effects on intention to comply (Table 6.29). While the degrees of effects for affective attitude and subjective norms in New Zealand were large and small, respectively, their effect sizes for both independent constructs in Malaysia were medium. Similar to the New Zealand sample, no impact was recorded from instrumental attitude, perceived behavioural control and fairness perceptions to intention to comply.

Table 6.29 Effect Size in the Intention to Comply
Scenario 1 – Malaysia (Overstating Business Expenses)

Construct Excluded	R^2 Excluded	f^2	Degree of Effect
Affective attitude	0.382	0.30	Medium effect
Instrumental attitude	0.525	0.00	No effect
Subjective norms	0.438	0.19	Medium effect
Perceived behavioural control	0.525	0.00	No effect
Fairness perceptions	0.525	0.00	No effect

In Scenario 2 for New Zealand, the results reveal that affective attitude, subjective norms, perceived behavioural control and fairness perceptions had effects on intention to comply with tax obligations, varying from a large effect to a small effect (Table 6.30). In particular, affective attitude, with an effect size of 0.44, had a substantial influence on intention to comply while the effect size of subjective norms is medium. Likewise omitting the perceived behavioural control and fairness perceptions constructs from the model had resulted in a small effect.

Table 6.30 Effect Size in the Intention to Comply
Scenario 2 – New Zealand (Understating Other Incomes)

Construct Excluded	R^2 Excluded	f^2	Degree of Effect
Affective attitude	0.625	0.44	Large effect
Instrumental attitude	0.738	0.00	No effect
Subjective norms	0.674	0.25	Medium effect
Perceived behavioural control	0.724	0.06	Small effect
Fairness perceptions	0.734	0.02	Small effect

When applying the Malaysian data this also results in an effect size for three independent constructs (Table 6.31). Affective attitude and subjective norms with effect sizes of 0.23 and 0.22, respectively, had medium influence on intention to comply with tax obligations. Likewise, $R^2_{excluded}$ also dropped when fairness perceptions were omitted from the model,

resulting in an effect size of 0.02, implying a small effect from fairness perceptions to intention to comply. Other than that, the remaining independent constructs seemed to have no impact on intention to comply.

Table 6.31 Effect Size in the Intention to Comply
Scenario 2 – Malaysia (Understating Other Incomes)

Construct Excluded	R^2 Excluded	f^2	Degree of Effect
Affective attitude	0.571	0.23	Medium effect
Instrumental attitude	0.647	0.01	No effect
Subjective norms	0.574	0.22	Medium effect
Perceived behavioural control	0.650	0.00	No effect
Fairness perceptions	0.646	0.02	Small effect

6.5.3 Significant Test of Path Coefficients

Path coefficients, in the structural model, represent the predictive link among constructs. All the path coefficients between the constructs are expressed in a standardised form to permit comparison of their relative strengths. To assess the statistical significance of the path coefficients, a bootstrap analysis was performed. For each model 200 sub-samples (as suggested by Chin et al., 2003) were created for the bootstrapping procedure. Table 6.32 presents the statistical outcomes, which include path coefficient, observed *t*-statistics and significance level for the 'overstating business expenses' scenario in both environments. Based on these statistical outcomes the results of the hypotheses testing in the structural model are summarised in Table 6.33.

In the 'overstating business expenses' scenario, fairness perceptions seemed to have no significant influence on intention to comply in either

country, suggesting rejection of Hypothesis 6, which states that *'fairness perceptions of the income tax system by New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviour.'* The important influence was documented by affective attitude (with path coefficients of 0.560 and 0.458) in both countries, while subjective norms (path coefficients of 0.192 and 0.388) had a moderate influence. These results provide support to Hypotheses 7a *(affective attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour)* and 8 *(subjective norms of New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviou*r), while Hypotheses 7b *(instrumental attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour)* and 9 *(perceived behavioural control of New Zealand and Malaysian taxpayers significantly influences their tax noncompliance behaviour),* which hypothesised the influences of instrumental attitude and perceived behavioural control on intention to comply, respectively, were rejected.

Hypothesis 10 was tested by examining the path coefficient of tax knowledge to the fairness perceptions. The study reveals that respondents in both countries commonly agreed that tax knowledge had a significant influence on their fairness perceptions. Based on the results, Hypothesis 10, which assumes that *'knowledge of the income tax system significantly*

influences taxpayers' fairness perceptions,' was accepted in both environments.

Next is Hypothesis 11 which was tested to examine the effect of tax complexity on fairness perceptions. The statistical outcomes in Table 6.32 reveal that similar results were found for Hypothesis 11 in both countries. It appears that tax complexity was a significant factor affecting taxpayers' fairness perceptions resulting in acceptance of the hypothesis which states that *'complexity of the income tax system significantly influences taxpayers' fairness perceptions in New Zealand and Malaysia.'*

Table 6.32 also demonstrates the path coefficient of tax knowledge to perceived behavioural control to test Hypothesis 12 which assumes that *'knowledge of the income tax system significantly influences taxpayers' perceived behavioural control in New Zealand and Malaysia.'* The result reveals that tax knowledge has no significant influence on perceived behavioural control in New Zealand. Hence Hypothesis 12 was rejected. The finding was contradictory to Malaysia which documented moderate influence of tax knowledge (with path coefficient of 0.163). Hence Hypothesis 12 was accepted for Malaysia.

To test the effect of tax complexity on the perceived behavioural control Hypothesis 13 which states that *'complexity of the income tax system*

significantly influences taxpayers' perceived behavioural control in New Zealand and Malaysia' was examined. Hypothesis 13 was rejected in New Zealand suggesting no significant influence of tax complexity on perceived behavioural control. On the contrary, moderate influence was documented in the Malaysian data (with path coefficient of 0.066) at the 0.10 significance level, resulting in acceptance of the Hypothesis 13.

Table 6.32 also demonstrates the effects that fairness perceptions had on affective attitude to answer Hypothesis 14a which assumes that *'fairness perceptions on the income tax system significantly influence taxpayers' affective attitude towards compliance in New Zealand and Malaysia.'* In New Zealand the result suggests that fairness perceptions had no significant influence on affective attitude at all. Based on the result Hypothesis 14a was rejected. This differs to the result obtained in Malaysia where Hypothesis 14a was accepted. Table 6.32 shows that fairness perceptions were found to have a moderate influence on affective attitude. The path coefficient was significant at the 0.005 level.

In relation to instrumental attitude fairness perceptions were documented as the influential external factors in New Zealand. The path coefficient was significant at the 0.05 level. The results differed in Malaysia where no significant influence was found. This contradictory evidence results in acceptance of Hypothesis 14b (*fairness perceptions on the income tax*

system significantly influence taxpayers' instrumental attitude towards compliance in New Zealand and Malaysia) in New Zealand but not in Malaysia.

Table 6.32 Path Coefficients in the Structural Model Scenario 1 (Overstating Business Expenses)

Propositions	New Zealand			Malaysia		
	Path Coefficient	***t*-statistics**	**Significance Level**	**Path Coefficient**	***t*-statistics**	**Significance Level**
Effects on Intention to Comply						
Fairness perceptions	-0.004	0.044	not significant	0.018	0.655	not significant
Affective attitude	0.560	7.917	0.005	0.458	10.128	0.005
Instrumental attitude	-0.032	0.512	not significant	-0.037	1.087	not significant
Subjective norms	0.192	2.647	0.005	0.388	9.418	0.005
Perceived behavioural control	-0.059	1.016	not significant	0.036	1.097	not significant
Effects on Fairness Perceptions						
Tax knowledge	0.324	3.942	0.005	0.486	16.373	0.005
Tax complexity	0.346	2.457	0.010	0.199	5.592	0.005
Effects on Affective Attitude						
Fairness perceptions	0.059	0.453	not significant	0.230	5.937	0.005
Effects on Instrumental Attitude						
Fairness perceptions	-0.216	2.190	0.050	0.004	0.099	not significant
Effects on Perceived Beh. Control						
Tax knowledge	0.062	0.646	not significant	0.163	3.838	0.005
Tax complexity	0.010	0.101	not significant	0.066	1.397	0.100

Table 6.33 Summary of Results of Primary Hypotheses Testing in the Structural Model
Scenario 1 (Overstating Business Expenses)

Research Question[99]	Research Hypotheses	Results	
		New Zealand	Malaysia
5. Do New Zealand and Malaysian taxpayers perceive the fairness of their income tax systems as being multi-dimensional?	**Hypothesis 5:** New Zealand and Malaysian taxpayers perceive fairness of their income tax systems as being multi-dimensional.	Accept	Accept
6. Do fairness perceptions influence taxpayers' compliance behaviour in New Zealand and Malaysia?	**Hypothesis 6:** Fairness perceptions of the income tax system by New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviour.	Reject	Reject
7. Does attitude towards compliance influence taxpayers' compliance behaviour in New Zealand and Malaysia?	**Hypothesis 7a:** Affective attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour.	Accept	Accept
	Hypothesis 7b: Instrumental attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour.	Reject	Reject
8. Do subjective norms influence taxpayers' compliance behaviour in New Zealand and Malaysia?	**Hypothesis 8:** Subjective norms of New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviour.	Accept	Accept
9. Does perceived behavioural control influence taxpayers' noncompliance behaviour in New Zealand and Malaysia?	**Hypothesis 9:** Perceived behavioural control of New Zealand and Malaysian taxpayers significantly influences their tax noncompliance behaviour.	Reject	Reject
10. Does knowledge of the income tax system influence taxpayers' fairness perceptions in New Zealand and Malaysia?	**Hypothesis 10:** Knowledge of the income tax system significantly influences taxpayers' fairness perceptions in New Zealand and Malaysia.	Accept	Accept
11. Does complexity of the income tax system influence taxpayers' fairness perceptions in New Zealand and Malaysia?	**Hypothesis 11:** Complexity of the income tax system significantly influences taxpayers' fairness perceptions in New Zealand and Malaysia.	Accept	Accept
12. Does knowledge of the income tax system influence taxpayers' perceived	**Hypothesis 12:** Knowledge of the income tax system significantly influences	Reject	Accept

[99] The first four research questions were answered with reference to descriptive statistics and the *t*-test analysis in Chapter 5.

behavioural control in New Zealand and Malaysia?	taxpayers' perceived behavioural control in New Zealand and Malaysia.		
13. Does complexity of the income tax system influence taxpayers' perceived behavioural control in New Zealand and Malaysia?	**Hypothesis 13:** Complexity of the income tax system significantly influences taxpayers' perceived behavioural control in New Zealand and Malaysia.	Reject	Accept
14. Do fairness perceptions on the income tax system influence taxpayers' attitudes towards compliance in New Zealand and Malaysia?	**Hypothesis 14a:** Fairness perceptions on the income tax system significantly influence taxpayers' affective attitude towards compliance in New Zealand and Malaysia.	Reject	Accept
	Hypothesis 14b: Fairness perceptions on the income tax system significantly influence taxpayers' instrumental attitude towards compliance in New Zealand and Malaysia.	Accept	Reject

The statistical results of path coefficients and significance level for the 'understating other incomes' scenario, in both environments, were presented in Table 6.34, which is followed by the summary of hypotheses testing in Table 6.35.

Hypothesis 6, which examines the influence of fairness perceptions on compliance behaviour, was true in both environments. In other words the New Zealand respondents were of the opinion that a better perception of fairness would motivate them to comply with tax obligations. This opinion was shared by the Malaysian sample. Based on the results Hypothesis 6 which assumes that '*fairness perceptions of the income tax system by New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviour'* was accepted.

A consistent result (with Scenario 1) was found for Hypothesis 7a on the effect of affective attitude on intention to comply. In both environments taxpayers perceived that affective attitude was an influential factor contributing towards compliance behaviour. The path coefficients were moderately high at 0.468 and 0.393 in New Zealand and Malaysia, respectively. Both coefficients were significant at the 0.005 level. Hence Hypothesis 7a, which states *'affective attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour'* was accepted.

Hypothesis 7b *(instrumental attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour)*, which examined the relationship between instrumental attitude and intention to comply, was rejected in New Zealand, suggesting no significant influence exists. However, in Malaysia, the presence of significant influence was documented at the 0.005 level. Hence this hypothesis was accepted. For Hypothesis 8 respondents in both countries shared the same belief that subjective norms had a significant influence on intention to comply. They believed that a higher motivation to comply with their referent groups will result in better compliance behaviour. As a result Hypothesis 8, which states *'subjective norms of New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviour,'* was also accepted. In addition to this a similar opinion was also

reported between the New Zealand and Malaysian samples in terms of the effect the perceived behavioural control had on the intention to comply. The taxpayers under study in both New Zealand and Malaysia perceived that perceived behavioural control was an important factor. Thus Hypothesis 9 that assumes *'perceived behavioural control of New Zealand and Malaysian taxpayers significantly influences their tax noncompliance behaviour'* was accepted. The negative coefficients (-0.159 and -0.044 in New Zealand and Malaysia, respectively), from the perceived behavioural control to the intention to comply, suggest that compliance behaviour will be higher when taxpayers have a low control over avoiding and evading tax.

The path coefficient from knowledge of income tax to fairness perceptions was examined in Hypothesis 10. The path coefficients of 0.346 (New Zealand) and 0.460 (Malaysia) were highly significant at the 0.005 level. Based on the results Hypothesis 10 which states that *'knowledge of the income tax system significantly influences taxpayers' fairness perceptions,'* was accepted in both environments.

Hypothesis 11 *(complexity of the income tax system significantly influences taxpayers' fairness perceptions in New Zealand and Malaysia)*, which tests the effects of complexity of the tax system on fairness perceptions, showed similar results to Scenario 1. The positive path coefficients, which were

significant at the 0.005 level, suggest that the less complex tax system will improve taxpayers' fairness perceptions. It appears that this construct had a consistent influence in both scenarios (overstating business expenses and understating other income).

To determine the effect of tax knowledge on the perceived behavioural control Hypothesis 12 which assumes that *'knowledge of the income tax system significantly influences taxpayers' perceived behavioural control in New Zealand and Malaysia'* was tested. From Table 6.34, Hypothesis 12 was accepted in Malaysia but not in New Zealand. This suggests that tax knowledge was found to have a significant influence on the perceived behavioural control in Malaysia. In particular respondents believed that higher knowledge of tax will result in higher control of taxpayers to avoid compliance.

With regard to Hypothesis 13 Table 6.34 shows that respondents in both environments did not consider tax complexity as having an important influence on the perceived behavioural control. Hence this hypothesis which states that *'complexity of the income tax system significantly influences taxpayers' perceived behavioural control in New Zealand and Malaysia'* was rejected. Similar results were documented for the effects of fairness perceptions on affective attitude and instrumental attitude in New Zealand, suggesting rejecting Hypotheses 14a *(fairness perceptions on the*

income tax system significantly influence taxpayers' affective attitude towards compliance in New Zealand and Malaysia) and 14b *(fairness perceptions on the income tax system significantly influence taxpayers' instrumental attitude towards compliance in New Zealand and Malaysia).* Contradictory evidence, however, was reported in Malaysia where path coefficients for both dimensions of attitudes were significant at the 0.005 and 0.100 levels, respectively. The results suggest that better fairness perceptions will improve affective attitude and instrumental attitude. Hence Hypotheses 14a and 14b were accepted. Chapter 9 will further discuss the implications of these results.

Table 6.34 Path Coefficients in the Structural Model Scenario 2 (Understating Other Incomes)

	New Zealand			Malaysia		
Propositions	**Path Coefficient**	***t*-statistics**	**Significance Level**	**Path Coefficient**	***t*-statistics**	**Significance Level**
Effects on Intention to Comply						
Fairness perceptions	0.071	1.6124	0.100	0.080	3.5314	0.005
Affective attitude	0.468	8.1173	0.005	0.393	9.5345	0.005
Instrumental attitude	0.052	1.1731	not significant	0.098	2.8113	0.005
Subjective norms	0.345	6.7241	0.005	0.394	9.1112	0.005
Perceived behavioural control	-0.159	2.9396	0.005	-0.044	1.5472	0.100
Effects on Fairness Perceptions						
Tax knowledge	0.346	5.0569	0.005	0.460	12.9232	0.005
Tax complexity	0.420	5.2071	0.005	0.251	6.7712	0.005
Effects on Affective Attitude						
Fairness perceptions	0.063	0.6592	not significant	0.143	3.4268	0.005
Effects on Instrumental Attitude						
Fairness perceptions	-0.074	0.6179	not significant	0.067	1.3994	0.100
Effects on Perceived Beh. Control						
Tax knowledge	0.041	0.4493	not significant	0.094	2.1058	0.050
Tax complexity	-0.029	0.3461	not significant	0.029	0.6265	not significant

Table 6.35 Summary of Results of Primary Hypotheses Testing in the Structural Model
Scenario 2 (Understating Other Incomes)

Research Question	Research Hypotheses	Results	
		New Zealand	Malaysia
Summary on Hypotheses 1 to 4 and Hypothesis 5 is available in Tables 5.32 and 6.33, respectively.			
6. Do fairness perceptions influence taxpayers' compliance behaviour in New Zealand and Malaysia?	**Hypothesis 6:** Fairness perceptions of the income tax system by New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviour.	Accept	Accept
7. Does attitude towards compliance influence taxpayers' compliance behaviour in New Zealand and Malaysia?	**Hypothesis 7a:** Affective attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour.	Accept	Accept
	Hypothesis 7b: Instrumental attitude towards compliance of New Zealand and Malaysian taxpayers significantly influences their tax compliance behaviour.	Reject	Accept
8. Do subjective norms influence taxpayers' compliance behaviour in New Zealand and Malaysia?	**Hypothesis 8:** Subjective norms of New Zealand and Malaysian taxpayers significantly influence their tax compliance behaviour.	Accept	Accept
9. Does perceived behavioural control influence taxpayers' noncompliance behaviour in New Zealand and Malaysia?	**Hypothesis 9:** Perceived behavioural control of New Zealand and Malaysian taxpayers significantly influences their tax noncompliance behaviour.	Accept	Accept
10. Does knowledge of the income tax system influence taxpayers' fairness perceptions in New Zealand and Malaysia?	**Hypothesis 10:** Knowledge of the income tax system significantly influences taxpayers' fairness perceptions in New Zealand and Malaysia.	Accept	Accept
11. Does complexity of the income tax system influence taxpayers' fairness perceptions in New Zealand and Malaysia?	**Hypothesis 11:** Complexity of the income tax system significantly influences taxpayers' fairness perceptions in New Zealand and Malaysia.	Accept	Accept
12. Does knowledge of the income tax system influence taxpayers' perceived behavioural control in New Zealand and Malaysia?	**Hypothesis 12:** Knowledge of the income tax system significantly influences taxpayers' perceived behavioural control in New Zealand and Malaysia.	Reject	Accept
13. Does complexity of the income tax system influence taxpayers' perceived behavioural control in New Zealand and Malaysia?	**Hypothesis 13:** Complexity of the income tax system significantly influences taxpayers' perceived behavioural control in New Zealand and Malaysia.	Reject	Reject
14. Do fairness perceptions on the income tax system influence taxpayers' attitude towards compliance in New Zealand and Malaysia?	**Hypothesis 14a:** Fairness perceptions on the income tax system significantly influence taxpayers' affective attitude towards compliance in New Zealand and Malaysia.	Reject	Accept

	Hypothesis 14b: Fairness perceptions on the income tax system significantly influence taxpayers' instrumental attitude towards compliance in New Zealand and Malaysia.	Reject	Accept

6.5.4 Direct and Indirect Effect Analysis

Direct and indirect effect analysis was adopted to investigate the total effects of the independent constructs on the dependent constructs. The total effects for each dependent construct can be computed by using the path coefficients. For instance, in this study, through affective attitude and instrumental attitude, there were indirect effects from fairness perceptions to intention to comply. To obtain the indirect effects, the path coefficients from fairness perceptions to affective attitude (and instrumental attitude) must be multiplied by the path coefficient of affective attitude (and instrumental attitude) to intention to comply (Vatanasakdakul, 2007). Numerically, the results of direct effect, indirect effect and the total effect on intention to comply, affective attitude and instrumental attitude were summarised in Tables 6.36 and 6.37.

Due to the intervening effect of affective attitude and instrumental attitude, indirect effects from fairness perceptions were added to the dependent construct - intention to comply - which subsequently increased the total effects. However, the effects did not improve greatly in New Zealand for either scenario.

In Malaysia, the original rank order for the first three independent constructs (based on the path coefficient or direct effect) in both scenarios, was the affective attitude, followed by the subjective norms and then instrumental attitude. When taking into consideration indirect effects the order had changed. Affective attitude and subjective norms were still ranked first and second, respectively, while fairness perceptions were now ranked third. The results suggested that the total effect of fairness perceptions is more transparent in Malaysia compared to New Zealand.

Table 6.36 Summary of Total Influence on Dependent Constructs Scenario 1 (Overstating Business Expenses)

	New Zealand			Malaysia		
Propositions	**Direct Effect**	**Indirect Effect**	**Total Effect**	**Direct Effect**	**Indirect Effect**	**Total Effect**
Effects on Intention to Comply						
Fairness perceptions	-0.004	0.040	0.036	0.018	0.105	0.123
Affective attitude	0.560	0.000	0.560	0.458	0.000	0.458
Instrumental attitude	-0.032	0.000	-0.032	-0.037	0.000	-0.037
Subjective norms	0.192	0.000	0.192	0.388	0.000	0.388
Perceived behavioural control	-0.059	0.000	-0.059	0.036	0.000	0.036
Effects on Affective Attitude						
Fairness perceptions	0.059	0.000	0.059	0.230	0.000	0.230
Effects on Instrumental Attitude						
Fairness perceptions	-0.216	0.000	-0.216	0.004	0.000	0.004

Table 6.37 Summary of Total Influence on Dependent Constructs Scenario 2 (Understating Other Incomes)

	New Zealand			Malaysia		
Propositions	**Direct Effect**	**Indirect Effect**	**Total Effect**	**Direct Effect**	**Indirect Effect**	**Total Effect**
Effects on Intention to Comply						
Fairness perceptions	0.071	0.025	0.096	0.080	0.063	0.143
Affective attitude	0.468	0.000	0.468	0.393	0.000	0.393
Instrumental attitude	0.052	0.000	0.052	0.098	0.000	0.098
Subjective norms	0.345	0.000	0.345	0.394	0.000	0.394
Perceived behavioural control	-0.159	0.000	-0.159	-0.044	0.000	-0.044
Effects on Affective Attitude						
Fairness perceptions	0.063	0.000	0.063	0.143	0.000	0.143
Effects on Instrumental Attitude						
Fairness perceptions	-0.074	0.000	-0.074	0.067	0.000	0.067

In addition to this the direct effect analysis revealed some interesting findings on the impacts of tax knowledge and tax complexity on the intention to comply. To perform the analysis, the Structural Model was extended by including the direct paths from tax knowledge and tax complexity to the dependent construct - intention to comply - where direct path coefficients were obtained.[100] The results showed little improvement in the R^2 (refer Table 6.38). With regard to path coefficients, the New Zealand sample indicates direct influence of tax knowledge on intention to comply at the 0.025 significance level for Scenario 1. The positive relationship suggests that having better knowledge of the tax system will improve tax compliance. However, no such significant relationship was documented for Scenario 2. Similarly in Malaysia the direct influence of tax knowledge on intention to comply was not significant in either scenario.

Tax complexity seemed to have an impact on the intention to comply in Scenario 2 for the New Zealand sample. In Malaysia, the influence of tax complexity was significant in both cases (overstating business expenses and understating other income). The results demonstrate that low complexity of the tax system will motivate taxpayers to comply with their tax obligations. Although these direct impacts were not hypothesised

[100] These direct paths were tested as previous studies (see for example, Carnes & Cuccia, 1996; Kasipillai et al., 2003; Loo, 2006; Loo et al., 2008; 2009; McKerchar, 2001; 2003; Richardson, 2006a) have

formally the results reveal the importance of both tax knowledge and tax complexity in taxpayers' decisions whether to comply or not.

Table 6.38 Summary of Direct Influence of Tax Knowledge and Tax Complexity on Intention to Comply

Propositions	Scenario 1		Scenario 2	
	New Zealand Path Coefficient	Malaysia Path Coefficient	New Zealand Path Coefficient	Malaysia Path Coefficient
Effects on Intention to Comply (R^2)	0.514 (0.491)	0.531 (0.526)	0.745 (0.740)	0.654 (0.652)
Tax knowledge	0.1610**	-0.0290	0.0410	0.0040
Tax complexity	-0.0800	0.0680**	0.0720*	0.0620**

* significant at the 0.05 level
** significant at the 0.025 level
Figures in parentheses are the R^2 of the existing structural models.

6.6 Summary

In this chapter, the regression analysis of the survey data was performed using PLS. The results confirm that fairness perceptions can take various forms namely, general fairness, exchange fairness, horizontal fairness, vertical fairness, retributive fairness, personal fairness and administrative fairness. PLS analysis was also used to identify the influences of fairness perceptions - and other variables under study - on intention to comply. Prior to the hypotheses testing, the measures were all tested and verified. These procedures were taken to ensure a valid and reliable instrument was used in the study.

The R^2 generated from the PLS analysis indicate that fairness perceptions, attitudes, subjective norms and perceived behavioural control explain more

documented significant relationships exist between the variables.

than 50 percent of taxpayers' decision to comply in both New Zealand and Malaysia. This suggests that the choice of applying the TPB in this study was appropriate. Tax knowledge and tax complexity explain between 28 and 37 percent of the variance observed for taxpayers' fairness perceptions in both New Zealand and Malaysia. Observing the relationships between each independent variable and dependent variable indicates consistent results in New Zealand and Malaysia. For example, in the 'overstating business expenses' scenario, the results in both countries show that intention to comply was significantly influenced by the affective attitude and subjective norms. Likewise, respondents had similar perceptions that tax knowledge and tax complexity had significant effects on fairness perceptions.

Consistent results across countries were documented when applying the second scenario on 'understating other incomes'. In this scenario, fairness perceptions, affective attitude, subjective norms and perceived behavioural control were found as significant factors affecting intention to comply among taxpayers in both New Zealand and Malaysia. The effects of tax knowledge and tax complexity on fairness perceptions were also comparable as in Scenario One. Apparently, fairness perceptions and perceived behavioural control had a significant influence on intention to comply in this scenario, as opposed to Scenario One. This could be attributable to the different types of the scenarios set out in this study.

In the first scenario, taxpayers were asked about the possibility of overstating business expenses while in the second scenario, understating other incomes is the issue of concern. Relatively, taxpayers may feel that they have greater flexibility to either comply or not to comply in Scenario Two since there is little evidence of the transaction (as they received cash income) compared to Scenario One, which involves business documents. In this instance, their perceptions on the fairness of the income tax system may be important in their decisions. Another possible explanation is the variation in the amount stated in the scenarios. In Scenario One, the amount was only NZ$2,500 (or MYR2,500 in Malaysia), compared to NZ$10,500 (MYR10,500 in Malaysia) in Scenario two. With the greater amount at stake, taxpayers may consider fairness perceptions as even more important. In other words, fairness perceptions will become a significant issue when it involves a sizeable amount of money. In short, the results imply that fairness perceptions deeply affect taxpayers' compliance decisions when there is opportunity to comply (or not comply) and the level of wealth involved is large. With regard to the effects of tax knowledge and tax complexity on perceived behavioural control, the evidence was only significant in Malaysia.

The inconsistent results between the two environments are evident in the effect of tax knowledge and tax complexity on respondents' perceived behavioural control. The Malaysian sample suggests a significant influence

of the variables but no evidence was found in the New Zealand environment. The results imply that a high level of tax knowledge and a low level of tax complexity in Malaysia (but not in New Zealand) may motivate taxpayers to avoid being compliant. One possible explanation for this could be due to the different tax systems themselves. In Malaysia, the compliance detection strategies may not be as efficient as in New Zealand (demonstrated by its IRD Compliance Model) that indirectly enables the taxpayers with good knowledge to manipulate the loopholes in the system. Moreover, the Malaysian income tax system which is relatively not complex compared to the New Zealand income tax system may also provide opportunity for taxpayers to avoid or evade tax. Other possible explanations could be the cultural differences between the two countries, which may affect taxpayers' societal norms and their compliance behaviour.

To summarise, this study adds to the limited literature in this area. This chapter showed that fairness perceptions, apart from the TPB elements, played an important role in taxpayers' intention to comply with their tax obligations. A comparison between the two countries applying two different scenarios further provides interesting findings. Nonetheless, in interpreting the results, it is important to bear in mind that this study involves two different tax jurisdictions with different sample selection.

Further, the low response rate in New Zealand data may have potential to affect the results.

The next two chapters discuss the results from the interviews with taxpayers. Subsequently, Chapter 9 will focus on the implications of this research and its key contributions by integrating the findings from both the surveys and interviews.

Chapter 7

Analysis and Results of Interview Data: New Zealand

7.1 Introduction

Taxpayers' views are expected to enrich the findings generated from the quantitative approach discussed in Chapters 5 and 6. For the sake of clarity, the data analysis and the results of the interviews of the two countries are discussed in two separate chapters (by country), namely Chapters 7 and 8. In this chapter, the qualitative findings derived from telephone interviews with taxpayers across New Zealand are presented.[101] Briefly, this chapter explores views and experiences of the taxpayers towards the issues under study.[102] Specifically, the discussion focuses on taxpayers' perceptions of the fairness of the income tax system, their knowledge and the complexity of the income tax system, and the associated impact on compliance behaviour. In addition, the effect of tax knowledge and tax complexity on fairness perceptions was sought.

7.2 Participants' Characteristics

From the invitation made to 2,267 potential participants, 92 filled in the consent form indicating their willingness to participate in the telephone interviews. With reference to the addresses, the forms received were

[101] Data analysis and results from interviews with Malaysian taxpayers are to be discussed in Chapter 8.

[102] Interviews are designed to inform/provide further insights from survey results.

divided according to the regions to ensure the interview participants (as far as possible) were representative of New Zealand taxpayers. For the purpose of this study, 30 participants took part in the interviews. Initially, 69 potential participants were contacted, but for various reasons 39 withdrew their consent.[103] The telephone interviews were conducted in November and December 2008.

The demographic description of the participants is presented in Table 7.1. The participants comprise 18 males and 12 females, from eight different regions in New Zealand. The largest group of participants reside in the Auckland region (ten participants), followed by the Canterbury and Wellington regions, with seven and five participants, respectively. In terms of participants' occupations, eleven were salary earners with incomes derived from diverse backgrounds. The detail distribution of these eleven participants, according to their job descriptions, are:

(1) three managers;

(2) two lecturers;

(3) one software consultant;

(4) one business analyst;

(5) one traffic engineer;

(6) one factory worker;

[103] Among the reasons are their busy schedule, hesitation for their telephone conversation to be recorded and health issues.

(7) one computer operator; and

(8) one builder inspector.[104]

In addition to the salaried group, twelve participants were retirees with various work experiences. For example, the interviewees included a former Deputy Governor of the Reserve Bank and a former Vice Chancellor of a New Zealand university. The other ten participants in this group were:

(1) two retired school teachers;

(2) one retired accountant;

(3) one retired customs officer;

(4) one retired business person; and

(5) five others who did not mention their previous occupations.

The interviews also involved five self-employed persons, one full-time student (also working part-time), and an individual receiving government benefits. This beneficiary was also earning salary income from his two jobs.

Demographically, the taxpayers participating in this study are identified as a mix of different occupational backgrounds and regional distribution, indicating a reasonably wide range of New Zealand taxpayers. It is anticipated that the differences in their social backgrounds would enable

[104] One of the managers had experience running a small business while one of the lecturers is currently operating her own business.

them to present views and arguments from different perspectives as well as provide rich information for the study.

Table 7.1 Demographic Description of the Participants

	Number		Number
Gender		**Region**	
Male	18	Auckland	10
Female	12	Bay of Plenty	1
	30	Canterbury	7
Occupation		Hawkes Bay	1
Retired person	12	Otago	1
Full-time student	1	Waikato	3
Self-employed	5	Wanganui	2
Salary and wage earner	11	Wellington	5
Beneficiary	1		30
	30		

7.3 Data Analysis and Results

7.3.1 Fairness Perceptions of the Income Tax System

When performing the step-by-step thematic analysis on the data as suggested by Braun and Clarke (2006), it was noticed that participants had mixed perceptions on the fairness of the income tax system. While some (43 percent) considered the income tax system to be reasonably fair, the majority (57 percent) were unhappy. Participants who viewed the income tax system to be fair considered the income tax system as a mechanism to redistribute wealth from the rich to the poor. In addition, some argued that paying tax is fair and not burdensome in the sense that it is part of a social responsibility that should not be avoided by any person living in a country. Others were satisfied with the income tax system on the basis that it is

relatively stable and fairly treats New Zealand society as a whole. For example, one respondent observed:

> "I think it's reasonably fair to the New Zealand society because of the fairly recent modifications to it by the current government or the intentions of the current government. In other words, I think nobody is heavily overtaxed and there doesn't seem to be an easy way which people can avoid tax, which is a good thing….In that sense, I think the tax system is reasonable and yes, right, I think it is a fair tax."
>
> (Participant 25, male, retired Vice Chancellor)

Despite the fact that participants were generally happy with the overall New Zealand income tax system, from the interviews, it appeared that participants were not completely satisfied with aspects of the current income tax system. For example:

> "I think yeah [the income tax system is fair], but it could always possible to fine tune it….The only issue I do have is, I think there is some unfairness around penalties…"
>
> (Participant 1, male, self-employed)

I think it's fairly fair. I don't really have any argument with it. I don't mind giving the money, but I don't expect that the money is used properly."

(Participant 4, male, retired)

"I'm happy with the system. I'm never happy with what they do with the money."

(Participant 24, male, retired business person)

When probed further on their concerns about the fairness of the income tax system, their perceptions can be grouped into several aspects of fairness. Participants with negative perceptions on the fairness of the income tax system had also given various explanations to justify their views. For instance, there was a claim that fairness of the income tax system should be determined based on: (1) how tax is collected; and (2) how tax revenue is spent. If fairness was defined in this manner, some taxpayers would have improved perceptions of the fairness of the income tax system. Otherwise, the income tax system would be perceived as not fair according to some participants. For example:

"In terms of tax fairness and perceptions or perceptions of fairness, whatever, I guess that I see there are two sides of the tax issue: one is

the tax government received over tax paid by [taxpayers] and the other is the government expenditure, how they spent the tax."

(Participant 13, male, retired Deputy Governor)

While the majority of participants agreed with the views that fairness perceptions should encompass efficient tax collection and proper government spending, their opinions on the fairness of the income tax system went far beyond those two aspects of the income tax system. This is supported by the analysis performed on taxpayers' views on fairness perceptions, which subsequently generated five main themes of fairness perceptions:

(1) general fairness;

(2) vertical fairness;

(3) retributive fairness;

(4) personal fairness; and

(5) administrative fairness.

7.3.1.1 General Fairness

In this study, general fairness is concerned with taxpayers' perceptions of the broader aspects of the income tax system, such as government spending of the tax revenue and the benefits system. The results from the interviews indicated very few were satisfied with the government spending of the tax revenues, with the majority signalling their great disappointment

concerning this issue. These participants firmly believed that tax revenues were not being properly spent in desired areas, such as health and education, and instead were wasted on government bureaucracy. This has led to the violation of trust in the government, as indicated by the following comments:

> "I guess the key thing is that the question of how the tax has been used. That is obviously going to influence people's thought[s] about the whole tax system. [At] the moment that I would have thought that perhaps the tax dollars [tax revenue] have not been necessarily used effectively [by the government], (so) that would have influenced my [negative] thought[s], I guess."
>
> (Participant 8, male, traffic engineer)

> "…I don't expect that the money is used properly...What people get really annoyed about is when they see that money is being used by people who don't need it, or abuse it, in other words, money which is not properly applied by the government."
>
> (Participant 4, male, retired)

> "I honestly feel that a lot of that money taken by [the] tax office is actually wasted and so I believe that can happen with any country in the world, but the one thing that does annoy me is that you earn your

money, put it away and [the government] just blow them on the useless scheme that does not make any sense to me whereas that money should be used for example in the health department. The money is not actually spent [on] getting nurses, on decent nurses, decent doctors into the places; you put it into the administrators; I can't get along with that."

(Participant 24, male, retired business person)

"The government that administers the tax system doesn't respect taxpayers, my general feelings, the way they waste [money]."

(Participant 17, male, computer operator)

"…I think too much tax spending has been spent on the bureaucracy, government bureaucracy has got too big and a bit inefficient. In terms of the main element that they spent, which is social welfare, health and education, I don't have problem with that…My main concern would be that too much of the tax has been spent on building up government departments; bureaucracy is too big."

(Participant 1, male, self-employed)

"I'm not really happy with [the] performance of our government. I completely oppose to the fact that they've sold a lot of New Zealand [assets], you know, the utilities, electrical utilities, you know, we,

> people's taxes bought the railways, people's taxes bought the electricity companies, built the dams, built the roads to the dams and everything like that, and then they get sold. I'm completely unhappy with that situation.
>
> (Participant 6, male, self-employed)

In relation to government spending, some participants further commented on the transparency issue where they claimed that the taxpayers were not well-informed on the details of how the tax revenue was spent. They expected a full disclosure of the government expenditure allowing them to examine the accounts and demonstrating greater government accountability. For example:

> "…I think there's a lot of hidden cost[s], which has not been made public or told to the public. I think people should be informed. I think everyone has the right to be informed…There should be an open book."
>
> (Participant 3, female, full-time student)

> "The public should be well-informed and there should always be accountability for how their tax has been used as well."
>
> (Participant 8, male, traffic engineer)

"…the problem is all our money just disappears in the black hole with people who become very careless on how they use it. While in small business if you are not careful with every single cent, you start losing everything. I want to see that same level of accountability."

(Participant 21, female, self-employed)

With regard to the social welfare/government benefits system, participants were generally pleased with the idea of assisting low income taxpayers to have sufficient money to live on. However, participants stated that the system must be implemented with care to ensure that wealth is distributed fairly and only to those genuinely in need. This is essential to avoid the misuse of money by those not deserving assistance. The following comments indicate participants' feelings on this issue:

"…I think the application of fund or benefits to people, I think they should be more closely monitored to ensure that they used for great purposes."

(Participant 4, male, retired)

"Low-income people on benefits - there are times that people actually do need those benefits - and there are some people who abuse it…"

(Participant 3, female, full-time student)

> "Providing benefits is good for those who really deserve it but not to those who are simply lazy to find work."
>
> (Participant 11, male, retired teacher)

Similarly, participants also expressed their concern with the possibility that too much assistance would create an unhealthy expectation that the government has the responsibility to provide everything for society. For example:

> "Providing benefits is good, but you know, it's making people realise that everybody is entitled to everything and I think we have to work for what we get…there are a lot of people who presume that the government has to pay everything for them…"
>
> (Participant 2, male, retired)

> "…I think at the moment that the government in New Zealand, really for last 100 years, has taken on some responsibilities, an increasing responsibility for providing housing for people rather than anything they do…"
>
> (Participant 25, male, retired Vice Chancellor)

7.3.1.2 Vertical Fairness

Vertical fairness suggests that people in different economic situations should be taxed differently (Kirchler et al., 2006). Ideally, vertical fairness is maintained when people with higher incomes are taxed at higher rates than those with lower incomes. This idea of ability to pay is part of Distributive Justice Theory (DJT) developed by Leventhal (1976), which asserts that the ratio of inputs and outputs need not necessarily be equivalent to achieve fairness, but rather it depends on individuals' needs. This issue has been long considered by the New Zealand income tax system where the progressive tax rates currently are as follows (New Zealand Inland Revenue, 2010b):

(1) 10.5 percent on income up to NZD14,000;

(2) 17.5 percent on income of NZD14,001 to NZD48,000;

(3) 30 percent on income of NZD48,001 to NZD70,000;

(4) 33 percent on income of NZD70,001 and above.[105]

This idea of progressive tax rates was, theoretically at least, agreed by the participants when they claimed that it is fair to impose higher tax rates on high-income earners rather than low-income earners. However, the implementation of the progressive tax rates under the current income tax system appeared to be unsuccesful. The results of the interviews indicate participants' beliefs that vertical fairness was not maintained in the tax

system. The majority of participants viewed the current progressive tax rates imposed on taxpayers as unfair. Some argued that higher incomes were not sufficiently taxed - others condemned the income tax system as 'oppressing' the poor and hence, there was a suggestion to not tax low-income taxpayers. The following quotes reflect these views:

> "Well, I think to some people, it [the tax rate structure] seems excessive but I don't think it is sufficient for people who make a lot of money. I don't think they get taxed enough."
>
> (Participant 2, female, retired)

> "I think that low income people are taxed too much. The higher income could be taxed more."
>
> (Participant 5, female, retired)

> "I think people on low income shouldn't pay any tax at all. It should be what I call a living wage that if people get below NZD36,000 or whatever, they shouldn't be paying tax. There's school children working on delivering phamplets, they get taxed, that's mean to me."
>
> (Participant 12, male, self-employed)

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[105] These rates were reduced from 1 October 2010.

The issue of vertical (un)fairness is not limited to the inequitable treatment between high-income earners and low-income earners but also between small business owners, who largely represent the middle-income group, and big companies. This was argued by participants who had experience running a small business, such that small business operators were not fairly treated relative to the big companies, who were entitled to various tax breaks. For example:

> "…for the small business people, like the huge percentage of the country tends to pay, and they are hardest hit with tax; as for big companies you get tax transition and things like that…The middle [income person], we don't get any tax break because we earn too much money, so they don't give [us] any tax break, and so we are the hardest hit to the next one [the higher income person] where they are living on million dollars a year, they get [a tax] break as well. A middle [income] person which I guess would be 80% of businesses in New Zealand or smaller business that I always run, they are the one[s], in my perception, they are the one[s] who get hit from both sides. So you don't get any help at either end, when you're in the middle."
>
> (Participant 20, female, office manager)

"…for small businesses especially for business where you don't have stock, you go to your bank and you certainly ask for business finance. Like when I first started my business, I need[ed] to show the bank [my] six-month working capital. Number one, the bank puts you on the highest possible interest rate; number two, they won't get someone like me, a person like, so they called the loan personal…and they charge you very, very high interest and you can't get [it] deducted as a business expense because it has been issued as a personal loan. While I'm using it as business capital, it's not tax deductible, so I end up as a small business person not only having to pay high interest to finance my business but I can't claim it as tax deductible expense. I end up paying more tax which I think is ridiculous. Seriously biased."

(Participant 21, female, self-employed)

The concept of ability to pay in vertical fairness was also raised with respect to secondary tax imposed on a second job. While undertaking a second job mostly involved the lower income and middle income groups, who intended to improve their financial situations, secondary tax seems to be burdening them,[106] instead of assisting them. This is due to the fact that the tax rate on the second job is much higher even though the total income

earned may still be within the lowest income bracket (New Zealand Inland Revenue, 2010d).[107] Even though a special tax deduction rate can be arranged with the tax authority to suit an individual's circumstances, many may not be aware of such an arrangement. In this case, the issue of communication of the information should be more of concern to Inland Revenue in their effort to improve fairness perceptions among the taxpayers. Some of the comments from the interviews are as follows:

> "…I used to have two jobs, you know, when I first came to New Zealand, you know, I worked at night, I worked all day in my professional [primary job], then at night time I've done cleaning you know, cleaning offices, banks, things like that, you know. Because I have part time job I used to pay high tax you know. So I recommend if somebody is prepared to do two jobs, he shouldn't be penalised, you know. He should pay less tax, not more tax, you know what I mean. For the second job, you should be taxed [at] the same rate maybe but not the higher rate, you know."
>
> (Participant 16, male, retired)

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[106] The secondary tax is essentially an interim tax; therefore the financial tax burden may be temporary rather than permanent in nature. However, the taxpayers may be burdened with an additional responsibility to file the tax return forms in order to obtain the tax refund.

[107] The secondary tax rate for an income up to NZ$48,000 is 22.7 percent.

> "I earn less than NZ$25,000 a year. Between me and my wife we earn, maybe NZ$11,500 each…I've got to pay the secondary tax if I go and find a job, doing it part-time…it's wrong, because you earned under a certain amount, why should you pay for it?...[I'm] not happy with it, because I'm paying the same as the man who earns NZ$45,000 a year, we shop at the same supermarket, we buy the same products, only he buys more or he buys a better quality, but he probably pays less tax than I do if I had a secondary tax… I'm still earning less than NZ$30,000. That's wrong."
>
> (Participant 9, male, beneficiary)

The results provide evidence that New Zealand participants place great emphasis on vertical fairness in forming their fairness perceptions. Even though they were satisfied that progressive tax rates were in place, they had great concerns on the equality of the tax rates imposed for various income brackets, which includes the issue of secondary tax.

7.3.1.3 Retributive Fairness

Retributive fairness suggests that, in order to be fair, the penalty imposed should match the crime or offence committed. As such, in taxation, various punishments, ranging from fines to imprisonment, are available to serve as penalties for different degrees of non-compliant behaviour. Such an understanding was shared by most of the participants in the study, who

claimed the necessity of penalty mechanisms to reinforce tax compliance among taxpayers; for example:

> "…I know there need[s] to be incentives to do the right thing [comply]…"
>
> (Participant 27, male, software consultant)

Likewise, participants' understanding of the concept of retributive fairness was implicitly expressed during the interviews where they demanded an equitable match of penalties to tax offences. The participants were of the opinion that strict penalties should be imposed on taxpayers who were deliberately avoiding or evading tax. On the other hand, more flexibility was expected from the tax authority when dealing with unintentional non-compliant taxpayers. This is because participants believed that penalising taxpayers for their genuine mistakes is completely unfair. Unfortunately, such practices were still taking place, resulting in grievances among taxpayers towards the income tax system. The following comments are reflective of participants' views in these issues:

"I think that people who do tax evasion should be hit heavily. That's different from people who missed the payment, not to run [away from paying tax] but forgetting it [unintentionally]. I think people who evade tax, they should be hit with a hard penalty."

(Participant 4, male, retired)

"If they are deliberately avoiding the tax, they should be penalised; if it's a mistake, they shouldn't be penalised."

(Participant 24, male, retired business person)

"The penalties, I'm not happy about [them] because some people cannot pay in [a] hurry and yet they get penalised."

(Participant 11, male, retired teacher)

"I think there's some unfairness around penalties for people who might make [a] mistake in calculating their tax and subsequently [are] discovered by the IRD that they hadn't paid enough… A few years ago, I know a number of people who through innocent mistakes were pretty well made bankrupt because they could not pay the penalties. I think the penalty rate for tax which is either late or has not been paid because of a mistake, in my understanding, is too burden[some]."

(Participant 1, male, self-employed)

"I received the assessment for my last taxation that was due on 27th of October and I received that two days after it was due. Immediately, there's the tax penalty for the neglect to pay. I don't have to write the letter saying it's my fault that I don't pay it but I said I don't receive the assessment until after the due date. But the whole point is they then have the total rights as to whether to charge you penalty or not. It wasn't my fault. To get things resolved towards them, I came back from holiday and I have this assessment for NZ$3,500 and I thought I don't owe this and the next envelope I opened was a demand for immediate payment and I thought what I did? *…I knew I didn't owe it, but I have to sort it out; the only way I can sort it out to get them off my back was by paying this NZ$3,500, which I did. I then proceeded to prove that I didn't owe it.* That took four months of constant working with the department providing them with the information I believe they already had, and filing the imputation returns going back to [year] 2000. I have to go back [through] all my [relevant documents to] tax. Luckily, I've kept it. That all took me a huge amount of time. I had to prove that I didn't owe it and I didn't owe it. *But to get the refund back it took me four months."* (emphasis added)

(Participant 12, male, self-employed)

Apart from the degree of penalties, some taxpayers viewed retributive fairness in terms of the relationship between the tax authority and taxpayers in relation to the mistakes made. From the participants' perspective, to maintain retributive fairness in the income tax system, equivalent penalties should be imposed on both the tax authority and the taxpayers for their mistakes, without any bias shown. A common example of an unfair treatment suggested by participants was the penalty interest rate, which was favourably biased towards the tax authority:

> "I think it [the penalty] affects them mildly. They [the IRD] can make mistakes and they get away with it. If we miss a day or two, they come to me like straight away, they are quite ruthless. I think the penalties are cruel."
>
> (Participant 4, male, retired)

> "…the penalty, there are not enough communications. One of those things is that if I am owed money, no effort is made to get the money to me. If I owed money, you know, penalty, penalty, penalty, but I'm not getting interest for the money they're withholding…if I'm owed money, the money should be put in my accounts and I should be notified in my last known address, you know, rather than the money just sitting until I made the enquiry…when I have to pay it [tax] and

if I owe it, they penalised straight away, while if I'm owed it, I should be given that money immediately."

(Participant 7, male, builder inspector)

"My greatest thing that angers me is, if you get provisional tax wrong, [you] have to pay penalty interest because you underestimate and if you're over[estimate], you get a miserable amount of tax interest back…if you overestimated your tax you get 10 percent interest, and if you underestimate you pay 10 percent. Equal. I think it's 14 percent if they charged you and 6 percent if you overpaid [is] unfair.

(Participant 18, male, retired accountant)

"I know if you pay too much tax, like if you, whatever it is, say 5 percent, but if you understate, then you'll be penalised by say 10 percent, I don't know what the amount is now, because my husband used to be self-employed, he doesn't work now, but I don't think that's fair. I mean, it should be the same amount."

(Participant 28, female, retired)

At this point, the results indicate participants' belief that to maintain retributive fairness in the income tax system, the tax authority should focus on:

(1) comparability between offences and penalties;

(2) flexibility in terms of penalising genuine mistakes; and

(3) equivalent treatment between taxpayers and the tax authority.

Fulfilling these three aspects of retributive fairness is expected to improve taxpayers' perceptions on the retributive fairness of the income tax system.

7.3.1.4 Personal Fairness

Personal fairness basically deals with taxpayers' perceptions as to whether the current income tax system is fulfilling their self-interest. From the interviews conducted, it appears that participants from all income levels tended to focus on tax rates. They were unhappy with the current tax rates and wished to have both lower rates and the secondary tax abolished. In addition, there were also comments suggesting New Zealand should place a greater emphasis on expenditure tax and less emphasis on income tax. A selection of participants' comments is outlined below:

> "I think people with a young family should have a lower [tax] rate…anybody on [a] middle income with young or old dependent[s], they should be taxed less."
>
> (Participant 6, male, self-employed)

"I think married couple[s] pay too much tax and married couple[s] with children too."

(Participant 17, male, computer operator)

"Well, I think the top income earners are [taxed] far too much, and I would like to see the tax rate lowered a little bit."

(Participant 14, female, self-employed)

"If you're on [a] benefit and you're earning NZ$15,000 a year for example, and you go and get a job, I would [suggest] abolishing the secondary tax and just use the first tax…"

(Participant 9, male, beneficiary)

"I'm inclined to think that my personal view is that, I would put more on expenditure tax and less on the income tax. I think that because it is easier to collect and [is] generally spread across [people]."

(Participant 13, male, retired Deputy Governor)

7.3.1.5 Administrative Fairness

Administrative fairness is concerned with taxpayers' perceptions of how the tax authority administers the income tax system. This concept of fairness emerged from Procedural Justice Theory (PJT), which asserts that

fairness in procedures may lead to fair outcomes. PJT postulates six principles underlying fair procedures, namely: consistency, bias-suppression, accuracy, correctability, representativeness, and ethicality.[108] In relation to this study, administrative fairness of the income tax system was not only observed in terms of the above-mentioned principles, but also with a few other elements. For instance, accessibility to the tax authority has been an issue amongst the participants. In fact, there was a claim that discrimination has taken place in terms of the accessibility to the tax authority, where tax accountants are given 'privileges' over ordinary taxpayers. This statement signals that the bias-suppression principle was violated. For instance:

> "…it's very difficult to get through to the taxation department. I have a query, it's a long time just getting on to them, and then to [have them] actually speak with you."
>
> (Participant 4, male, retired)

> "…I do know that it is very difficult if you need to make contact each time. It is very difficult to get in touch with any of them, if you ring you can't actually get the person and or you have to hang on for a long time. I only tried once and then I went through the process of getting on the system where I could do it on the computer but I'm

[108] The details of these principles were discussed in Chapter 2.

not sure. I don't have a case to use it but I don't know how satisfactory it would be. I think accountants in that sense, have special lines so that they get through to somebody, but the general public I think they get pretty frustrated."

(Participant 30, female, retired teacher)

Despite the criticisms on the accessibility of the revenue authority, participants were quite satisfied with the tax authority when salary and wage earners were no longer required to file tax return forms. Such simplicity, however, was not enjoyed by the self-employed group, who remain burdened with a lot of paperwork. This situation seems to be most unsatisfactory as the responsibilities to organise tax matters rests solely with the taxpayers. Participants made the following comments:

"I think the administration is quite good because we don't have to put in tax returns and most people don't have to put tax returns in."

(Participant 27, male, software consultant)

"I think it is the fact there is so much paperwork with the New Zealand tax system, so much online work you have to do…their administration, when you get through to them, is quite efficient, we have found. But the emphasis is on the taxpayer to find the person you need, not in the other way around."

(Participant 26, female, lecturer)

"GST for businesses has to be completely overhauled. It has too much administrative work. Plus you need to collect the tax and then reconcile all the banking and you can't make a mistake. Not everybody is good at maths or anything like that…I mean, it's not fair to ask all small business people to do that, like if you get everything done by an accountant, then it's gonna cost you heaps more money, like NZ$2,000-NZ$3,000 a quarter or something like that…a lot of things that have to be collected now, you have to collect for the pension scheme, Kiwi Saver and also the people [who] have got student loans. You are liable to collect them, but with PAYE, [I have] always done that, and I think that is reasonable. But all the other things are too much administration for small business."

(Participant 6, male, self-employed)

Another aspect of administrative fairness that participants commented on was administering taxes for beneficiaries. Participants claimed that taxing

beneficiaries and low income people had actually resulted in huge tax administrative costs. Also, participants commented that it seems unreasonable for the tax authority to impose tax on benefits which were essentially designed to help low income people. In relation to this, participants were suggested excluding low income people from the income tax system, which would subsequently reduces the number of people Inland Revenue has to administer, and associated administration costs. For example:

> "Things like benefits seem to me like they are [a] waste of money, time and effort. People gather tax from people who perhaps shouldn't be taxed anyway. If you get to give the benefits, why not just give the [net] figure. It's [a] waste of time, giving them something and then taxing it."
>
> (Participant 10, male, retired custom officer)

Participants in this study also considered the administrative fairness of the income tax system in terms of the moral and ethical standards, which includes the friendliness of Inland Revenue staff. The participants claimed that this issue of unfriendliness was apparent particularly during a tax audit where Inland Revenue staff had the authority to inspect taxpayers' documents and premises. In this situation where they have so much power, participants stated that Inland Revenue staff failed to convey their 'good

values' through proper communication. Some of the comments offered include:

> "I suspect that the tax department seems to have powers that other departments don't have. Well, they can hound people."
>
> (Participant 17, male, computer operator)

> "…the humanity side, people actually administering the tax in the department, I think they have got so much power. I have seen that when I was in business, when they come to check us out, you know; I can't see how we can change human nature."
>
> (Participant 24, male, retired business person)

In order to be perceived as fair, the policy or rules employed by the revenue authority must have gone through a decision-making process which not only involved the tax authority, and tax experts, but also taxpayers. This PJT principle of representativeness suggests that society will be more likely to perceive a system to be fair when they have been involved in the relevant decision-making. However, the comments forwarded by one participant in this study indicates that their opinion was not sought prior to the implementation of new tax rules or policy,[109] hence

[109] Since 1995, tax policy has been developed using the Generic Tax Policy Process (GTPP). The process allows Inland Revenue to develop more practical options for reform by drawing on information

resulting in negative perceptions of the administration of the income tax system:

> "…you know that there's a new regulation regarding the dates for provisional tax payments, you know that, what is date is the 15th of January? Do you know what's wrong with that date? [long holiday]. What else do you think happens in 99 percent of businesses in New Zealand in January? I can tell you that there's a lack of cash because people are going [on] holiday, there [is] a lot of money going out and a small amount coming in. So what does the department do? They say, we are going to have our tax. One, people are going away for a holiday; and two, this is on the very worst month of the whole financial year. That proves to me that a whole lot of PhDs, and highly qualified people make decisions with no idea [of] the impact of them, alright? In business, you want to be able to spread your cash responsibilities over the whole year, what you're trying to avoid is to hold a lot of cash bank at one month and a very little cash in the bank in the others. So you try to spread your expenses. So, what the department has done…the department has decided to put my GST

provided by the private sector and the people who will be affected. This is made to ensure a better and more effective tax policy development, as well as to increase the opportunity for public consultation (see Sawyer, 1996a for details on the phases of GTPP). Thus, arguably taxpayers can be involved through the select committee, submission process etc. (New Zealand Inland Revenue, 2010c). Unfortunately, taxpayers perhaps are not aware of their rights to participate in the process, which leads them to have negative perceptions on new policies or rules which are implemented. This is again, an issue of communication which requires attention from the IRD.

(goods and services tax) and my provisional tax payments, all in the same month…"

(Participant 12, male, self-employed)

The above discussion indicates that from the participants' perspective, they had concerns about the administration of the income tax system in terms of:

(1) accessibility to the tax authority;

(2) responsibility in administering tax matters;

(3) friendliness of the tax authority's staff; and

(4) the decision-making process;

all of which subsequently affected their fairness perceptions.

7.3.2 Tax Knowledge

In this study, the researcher has sought to understand the level of tax knowledge among taxpayers, which encompasses general knowledge, technical knowledge and legal knowledge (concerning taxation). However, during the interviews, participants were generally asked about their knowledge of the income tax system without mentioning a specific type of knowledge as mentioned above. These types of knowledge only emerged while analysing the participants' responses to the questions. The results indicate that some participants had a general idea of the income tax system but not much on the details of the system. They admitted that their

knowledge was restricted to a broad knowledge of the income tax such as, the objectives of income tax, types of income tax, and tax rates. The following are examples of the comments received:

> "It [the income tax system] is a progressive system which essentially assists with redistributing wealth at a certain stage."
>
> (Participant 1, male, self-employed)

> "I don't [have a good knowledge of tax]. I know that people are taxed to pay bills in the country, employment, social security, something like that…"
>
> (Participant 3, female, full-time student)

> "Pretty limited, really. I know that there are obviously the goods and services tax that the company has to pay for and the employer has to deal with the PAYE [Pay As You Earn] and there is things like fuel tax."
>
> (Participant 8, male, traffic engineer)

"I'm not intimate with the details of some of the taxes. I know what they [government] are getting [through taxes]…where they're going [the government expenditure] and coming from [various sources of tax] but I don't think that I know all about the tax system…"

(Participant 10, male, retired custom officer)

"Tax knowledge, obviously with my background, I've got better than average, but I certainly wouldn't claim to be a tax expert; I [am] certainly not at the details level, but much more on a broader policy [level]."

(Participant 13, male, retired Deputy Governor)

The majority of the participants, when asked about their tax knowledge, instantly revealed their knowledge of the technical parts of the income tax system. This implicitly indicates that technical knowledge is very important to them. This does make sense due to the need to have applied tax knowledge when meeting their income tax obligations. When taxpayers are lacking in technical knowledge of taxation, this is not an issue for salary and wage earners (even though all of them admitted to having limited knowledge), since they do not have to file tax returns. However, such a deficiency is certainly of concern for the self-employed people or those with other incomes who are required to file tax return forms. This is evidenced from the study where only two participants (both were retirees),

claimed to independently prepare their own tax return forms, while the remaining participants (with obligations to file the tax return forms) sought help from accountants:

> "Well, I do all my tax returns [but my knowledge] is still limited, I guess."
>
> (Participant 4, male, retired)

> "I would say, [in terms of tax knowledge] I'm better than most. I used to be an accountant years ago, so I've got a fairly good knowledge of it."
>
> (Participant 18, male, retired accountant)

> "[My tax knowledge is] very limited. I've tried to do it [tax return], but it's confusing."
>
> (Participant 5, female, retired)

> "Not that good…I use accountants for my income tax returns. I don't know too much about it."
>
> (Participant 1, male, self-employed)

"Average, really. I have a tax accountant. I don't personally do my income tax returns. I have got my tax accountant to do that."

(Participant 14, female, self-employed)

"I would say my knowledge is quite good. I actually prepare the tax returns…I have tax accountants that I have to ring for that information because I don't know it myself…"

(Participant 12, male, self-employed)

"I have a very good accountant, so I expect my accountant to make sure that I'm informed. I've been a self-employed [person] for a lot of years, so yeah, I think I have as much as I need to know."

(Participant 20, female, office manager)

From the interviews, very few participants mentioned their knowledge of the legal aspects of the income tax system. This could be due to the fact that they had little knowledge of it and/or they did not find it to be an important aspect of income tax to discuss.

7.3.3 Tax Complexity

With regard to the complexity of the income tax system, the majority of the interview participants claimed that the system is generally too complex for taxpayers to understand. This opinion was shared not only by the self-

employed people but also by the salary and wage earners, retirees and even students. While one participant put the blame on the multitude of forms for causing the complexity in the income tax system, another claimed that the income tax itself is inherently complex. With that in mind, it is therefore not surprising that the majority of the participants regarded the income tax system as seriously complicated. The following is a sample of views from participants:

> "It is [complex] for somebody like me. I do try to understand like I read about it and I just get lost. [It's] not for me. Some people's brains are very financial and I think my brain is not."
>
> (Participant 15, female, factory worker)

> "It is complex. I think it could be made more simpler for everybody, so everybody truly understands because sometimes they make forms and it's too much. That needs to be taken out."
>
> (Participant 3, female, full–time student)

> "I think the tax system is really, really complex. I think it is so in the most countries. I think the main reason for the taxation to be so complex is that government attempts to use [the system to] firstly, redistribute incomes and secondly to achieve other social goals.

They are trying to take the tax system and use it for something that the tax system is not really designed for."

(Participant 13, male, retired Deputy Governor)

"I think it is [complex] for older people, I don't know about younger people, unless they have a good accountant."

(Participant 2, female, retired)

Parallel with the mainstream opinion among participants that the income tax system is complex, some participants expressed their concern towards the self-employed who need to deal with onerous tax matters. This concern makes sense since the self-employed have to deal with various tax matters including provisional income tax, PAYE, GST and so on, which is expected to result in high compliance costs. For instance, three participants commented:

"…how is, you know what they call Mr. Average on the street, going to understand this. He's not, and so, I feel very sorry for people who are trying to start up their business, but compliance costs are huge."

(Participant 12, male, self-employed)

"…when you start getting into self-employed or when you start becoming an employer, [the tax system is] getting quite complex."

(Participant 22, male, business analyst)

"…with regard to the sole trader, the small business, those who employing less than five people or people who are consulted for trying to pay their own tax, I think they get in trouble. I think the provisional tax is the one with that problem…"

(Participant 26, female, lecturer)

Undeniably, there were interview participants who considered the income tax not to be complex. However, according to four such participants, this view was merely true in the case of salary and wage earners. It is also important to note that the remaining participants, who had a favourable opinion on the complexity of the income tax system, were four retirees, one salaried person and a self-employed person who had a tax accountant to deal with her tax matters. In other words, their comments on the complexity of the income tax system may be biased since they had little or no experience dealing with tax matters themselves. A selection of comments follows:

"It's not complex and I don't have problem with it."

(Participant 11, male, retired teacher)

"As it is at the moment, no, not complex."

(Participant 7, male, builder inspector)

"[The income tax system is] relatively easy.

(Participant 18, male, retired accountant)

"Well, for wage and salary earners, it's pretty simple, [it is] deducted from your pay. But from an employer's point of view, it might be a bit different."

(Participant 19, male, bank manager)

"I find it quite straight forward because they, you know, IRD just send you the information and you can claim for your donation. I mean, I think, it's a lot more straightforward now even without accountant; it's more straight forward now too because they can just click the IRD website and see what have been paid in terms of salary, and what rates have been taxed on, all of those kind of things."

(Participant 23, female, lecturer)

In relation to the above comments, one participant lent his support to the comment that the income tax system is not difficult for salary and wage earners as long as there were no other sources of income. In this instance,

he shared his experience dealing with foreign income which forced him to consult his accountant in preparing tax return forms. He further claimed that such complexity had benefited none other than the accountants and lawyers. Such a statement provides support to previous studies by White (1990) and Sawyer (1996b), who discussed the complexity scenarios preferred by various groups of tax professionals. Specifically, this participant stated:

> "Well, it is not complex if you're wage earner, an automatic deduction. When there are significant changes in taxation, and there have been recently, the tax on overseas investment there's actually was a blurring and complex introduction. I mean, in my own particular case, for the first time ever, I have to use an accountant to do my tax return quite simply because I had some modest investments overseas and I had to pay tax on them. That, I think, was crazy because the only people who really benefit from that are the accountants because the tax system is too complex…and the second beneficiary is the lawyers."
>
> (Participant 25, male, retired Vice Chancellor)

7.3.4 Compliance Behaviour

Based on the literature discussed in Chapter 2,[110] this study assumes that taxpayers were considered to be complying with the income tax system when they filed all their required tax return forms within the stipulated time frame and these return forms correctly report their tax liabilities in accordance with the relevant tax laws (Roth et al., 1989). To capture tax compliance behaviour, participants were initially asked about their perceptions of taxpayers' compliance behaviour in general. Most participants implicitly claimed that taxpayers' compliance behaviour should be observed in terms of their sources of income. For salaried taxpayers, where their taxes were deducted at source, their compliance behaviour would be undoubtedly high since they have no choice but to comply:

> "Most people that I've mixed with, I think, pay [a] reasonable amount…well, knowing that they have no chance of avoiding it because [they are] on a salary, and particularly when you've got investment income, again, [whether to comply or not] up to the source [of incomes]."
>
> (Participant 18, male, retired accountant)

[110] Refer section 2.5.2 for details.

"…well, somebody in my position [salary earner], is in no position to do anything about it really, because I don't have any control."

(Participant 17, male, computer operator)

"Wage and salary earners do [comply]. But I know there are a lot of businesses out there that don't pay their fair share of taxes. And I believe someone protected it, particularly I'm gonna use the term, say Cambodian shop owners who have bakeries, although they work very long hours (seven days a week), I know the cash that they actually declare is the fraction of what they [are] actually earning, all right."

(Participant 19, male, bank manager)

Unlike salaried taxpayers, the self-employed have opportunities to decide whether to comply or not comply with their tax obligation. Even though this view was mainly brought up by salary and wage earners or retirees, one participant, who used to be self-employed, admitted to the fact that many self-employed people evaded tax. This evasion practice was performed by simply adjusting the income and expenses in the business to end up with a smaller tax liability. Participants commented as follows:

"I think that most people, you know, that have [a] small sole trader business, are you trying to tell me that the local dairy owner or fruit

shop owner [is] paying the tax he should be paying? I'm saying you are having a laugh."

(Participant 7, male, builder inspector)

"I would say that the small self-employed businesses, I would have thought, may be trying to have a little bit of tax evasion. Doing cash jobs for friends and that, but otherwise I think the IRD is pretty hard to have not complied with, I would have thought."

(Participant 8, male, traffic engineer)

When probed on the reasons for tax non-compliance, various answers were given by the participants. The first is that the taxpayers' attitude of being greedy and no feelings of civic duty to share their incomes with other members of the society, as stated in the following comments:

"They're just greedy. They just want to keep more money themselves."

(Participant 4, male, retired)

"…some [people do not comply], I think it's just real greed, really…I think some people just hold that kind of an attitude to life really, and comes into their taxes."

(Participant 23, female, lecturer)

Another potential reason for non-compliance, from the participants' perspective, was the taxpayers' belief that they could avoid paying tax without being caught by Inland Revenue. Such perceived behavioural control among taxpayers motivated them to constantly not comply with their tax obligations. Some attributed that control to the assistance provided by the accountants, while others blamed the loopholes in the tax system itself that provided room for manipulation:

"…because if people can get away with things, they will."

(Participant 5, female, retired)

"I think it is possible that they think that for small occasional, say, source of income, they probably do things for friends, and they might think that they can get away with it enough."

(Participant 8, male, traffic engineer)

"I think probably most people would have tried to avoid tax if they know they can get away with it."

(Participant 13, male, retired Deputy Governor)

Interestingly, one participant, who was formerly a self-employed person, claimed that good tax knowledge could also motivate taxpayers to avoid (or evade) paying tax. In this instance, this comment suggests that taxpayers with good tax knowledge were not necessarily expected to

comply with their tax obligations since some may have misused this in their attempt to avoid fully complying:

> "If you've got good knowledge, you'll probably attempt to, well, I wouldn't say avoid, but yeah, avoid paying as much, paying unnecessary tax."
>
> (Participant 24, male, retired business person)

Complexity of the income tax system was perceived as another rationale for non-compliance among taxpayers. Participants believed that complexity of the income tax system compelled taxpayers to not comply, either intentionally or unintentionally, for instance:

> "…I also think that probably some people don't comply strictly because the tax system is too complex."
>
> (Participant 12, male, self-employed)

> "I think, sometimes people try to deliberately avoid doing it [tax compliance] because the aid [assistance from the IRD] is painful, especially if you're a small company and the provisional tax is coming…"
>
> (Participant 26, female, lecturer)

"…I think most people try to be compliant and if they aren't, it is because it is too complex."

(Participant 30, female, retired teacher)

Another significant explanation for non-compliance was the fairness perceptions of the income tax system as a whole. Participants clearly mentioned that their negative perceptions of the income tax system, particularly on the tax rate structures and government spending, had motivated them to avoid and evade paying tax:

"I don't think we do comply properly because the system is not fair…I think that with a fairer tax, I think that we would comply, we would be much more happy to comply and we would like; I mean most of my [business expenses], in my business dates you know, I put back most [expenses] to wages so I don't have to pay such a high percentage in tax, but if it was a fair amount, I don't think we would have creative accounting like we do now."

(Participant 20, female, office manager)

"And I think in most cases, people will evade it because they feel that money has been wasted."

(Participant 24, male, retired business person)

"I think a lot of [non-compliance behaviour] is down to people' perceptions of whether they are being treated fairly or not."

(Participant 23, female, lecturer)

7.3.5 Tax Knowledge, Tax Complexity and Fairness Perceptions

During the interviews, participants were also asked about the effects of tax knowledge and tax complexity on the fairness perceptions. In relation to this, participants' views were divided into three groupings where the first grouping suggested no influence of either tax knowledge or tax complexity on the fairness perceptions. Comments from this perspective include:

"I think I've got reasonably good knowledge, it [my fairness perceptions] remains as it is…it [tax knowledge] won't affect fairness perceptions…"

(Participant 15, male, self-employed)

"…I think the perception is not of tax [knowledge], doesn't matter how well we know the tax law, there's more business persons like myself feel that we are overtaxed anyway, so I don't think we particularly want to have any more knowledge because what [will] happen [is] that the tax number that we have to pay is tax on the profit we made, overall is much more relevant than any other issue."

(Participant 27, female, salaried person)

"I don't think it [fairness perception] is due to complexity. I think it's just the way it's [the income tax system as a whole] done."

(Participant 22, male, business analyst)

The second grouping, on the other hand, agreed that tax knowledge had affected the fairness perceptions to a certain degree, in a positive manner. In other words, they were suggesting that taxpayers with good tax knowledge may understand more of the income tax system, hence resulting in better perceptions of fairness:

"I think if I have information I may well have a different [fairness] perception."

(Participant 23, female, lecturer)

"Yeah, probably some people haven't got sufficient knowledge and therefore their perceptions of it [the income tax system], they think it's unfair."

(Participant 30, female, retired teacher)

The third grouping claimed that tax complexity actually had affected their fairness perceptions. They claimed that a simpler income tax system would result in fairer perceptions among the taxpayers as suggested in the following comments:

"I think I do [agree that a simpler tax system would improve fairness perceptions]."

(Participant 26, female, lecturer)

"I think it [complexity] probably does [lead to negative fairness perceptions]."

(Participant 30, female, retired teacher)

7.4 Summary

In this chapter, a thematic analysis of the interviews with a sample of New Zealand individual taxpayers was performed. The analysis involves identifying important features of the data (coding), collating the features into potential themes and reviewing the potential themes. Thereafter, the themes were defined, named and analysed. From the analysis, the results suggest that New Zealand participants had mixed perceptions on the fairness of the income tax system. Specifically they had concerns on five aspects of fairness perceptions, namely: general fairness, vertical fairness, retributive fairness, personal fairness and administrative fairness. These concerns should at least provide a signal to Inland Revenue on the aspects of income tax system that need improvements.

When discussing about their knowledge of the income tax system, New Zealand participants appeared to have inadequate knowledge on the

technical aspects of income tax system. This issue was even critical among the self-employed participants who are expected to deal with onerous tax matters, such as PAYE, GST, KiwiSaver etc. In dealing with these tax affairs, they may have to incur more compliance costs (in terms of time and money), which might be the source of their frustrations towards the income tax system.

The self-employed participants also perceived the current income tax system to be complex. They claimed that while the income tax system itself is inherently complex, the huge amount of paperwork to be completed in complying with their tax obligations further escalated the problem. This is not surprising as the New Zealand income tax system has been criticised for being overly complex. Even though tax simplicity programme has been continuously undertaken, perhaps the benefits of such programme were not yet visible, in the view of the participants.

With regard to their impact on taxpayers' compliance behaviour, participants generally believed that negative fairness perceptions, attitude, inadequate technical knowledge, perceived behavioural control and complexity of the income tax system have partly contributed to taxpayers' noncompliance. In fact, self-employed individuals were perceived to have more opportunities (compared to the salaried and wage earners) to avoid or

evade paying tax by manipulating their incomes and expenses in the business.

In addition to this, a mixed opinion on the effect of tax knowledge and tax complexity on fairness perceptions was reported. While some participants agreed that tax knowledge and tax complexity has no influence on fairness perceptions, others argued that taxpayers with good knowledge of tax, coupled with a less complex tax system, may contribute to better fairness perceptions.

The second part of data analysis and results of the interviews continues in the following chapter. In particular, a discussion on thematic analysis and results of the interviews focusing on Malaysian taxpayers will be presented.

Chapter 8

Analysis and Results of Interview Data: Malaysia

8.1 Introduction

A similar approach to analysing the data in Chapter 7 is adapted in this chapter. From the analysis, the qualitative findings derived from telephone interviews with taxpayers across Malaysia are presented. Briefly, the discussion focuses on taxpayers' perceptions of the fairness of the income tax system, their knowledge and the complexity of the income tax system, and the associated impact on compliance behaviour. In addition, the effect of tax knowledge and tax complexity on fairness perceptions was sought. Finally, a brief discussion comparing the results of the two countries is presented.

8.2 Participants' Characteristics

Similar procedures to the New Zealand part of the study were carried out in Malaysia in order to obtain at least 30 participants for the interviews. The procedures began with an invitation made to 2,267 salaried taxpayers across the country, where 137 expressed their written consent to be interviewed. From this number, 58 potential participants were contacted where eleven telephone calls made were unanswered and another six taxpayers withdrew their consent. The remaining 11 taxpayers contacted were either on leave or attending long term courses which prevented them

from taking part in the interviews. The telephone interviews were conducted in May and June 2009.

The interview participants were allowed to communicate either in the Malay language (Malaysian national language) or in the English language or a combination of the two. However, for the purpose of analysing and reporting the results, comments offered in the Malay language were carefully translated by the researcher, while the Malay versions are attached in Appendix 14 for reference. To distinguish between the translated versions from the original version (where the English language is used) in the text, the term 'non-translated' is used for the comments that are originally drawn from participants' own words (rather than being translated), at the end of the comments cited.

The participants' characteristics according to gender, employment sector and region, are set out in Table 8.1. In terms of gender, more than two-thirds were male participants and only seven were females. The participants were representative of the four regions, with the majority from the central part of Peninsular Malaysia. This is followed by the southern region and the east coast region, with eight and seven participants, respectively.

With regard to the employment sector, 21 participants were attached to the public sector while the remaining nine participants were in the private sector. The distribution of the participants according to their employers in the public sector was:

(1) four senior executives from the Pilgrimage Fund Board;

(2) four senior executives from the Accountant General Department;

(3) three officers from the Royal Customs Department;

(4) three officers from the Council of Trust for the Indigenous People;

(5) three officers from the Employees Provident Fund;

(6) two statisticians from the Department of Statistics;

(7) one deputy director of the National Registration Department; and

(8) one lecturer from a public university.

The nine participants from the private sector comprise:

(1) six executives from Telekom Malaysia Berhad;

(2) two bank officers; and

(3) one laboratory manager of a private hospital.

Table 8.1 Demographic Description of the Participants

	Number		**Number**
Gender		**Region**	
Male	23	Northern region	5
Female	7	Central region	10
	30	Southern region	8
		East Coast Region	7
Employment Sector			30
Public sector	21		
Private sector	9		
	30		

8.3 Data Analysis and Results

8.3.1 Fairness Perceptions of the Income Tax System

At the initial stage of the interviews participants were asked about their general perceptions of the income tax system. Interestingly, all participants promptly indicated a favourable response towards it. They believed that the income tax system had been reasonably fair to them in meeting a broader objective at the national level; that is, to generate revenue for the government and redistribute wealth amongst society. For an understanding of their perceptions of fairness, participants were probed on several aspects of the income tax system that might be of interest to them. The conversations led them to reveal several aspects of fairness that were important, and these were classified into four main themes:

(1) general fairness;

(2) vertical fairness;

(3) retributive fairness; and

(4) administrative fairness.

8.3.1.1 General Fairness

With regard to general fairness, participants had mainly discussed two interrelated issues, namely: (1) an inefficient use of tax revenues by the government; and (2) a lack of disclosure of government expenditure. In relation to government spending, participants claimed that taxpayers' money was wasted as a result of the government's incompetency. Despite

having promising national plans and a yearly budget in place, the outcomes from such national plans were not readily visible to the public. This issue of inefficient spending was of more concern when the basic infrastructure, such as schools, was not well taken care of. For example:

> "…sometimes, we are quite frustrated because sometimes we look at the government expenditures, it is not what we expect, too much is being wasted."
>
> (Participant 9, male, lecturer of a public university)

> "I'm sitting in [the] government sector, I know a lot. Personally, [I believe] certainly there is a lot of money being wasted. In terms of management, I would say they are incapable, how they manage the money, how they allocate the money. Probably in terms of overall budget, it seems very good, such as more funds on education, some [money] for defence and some for SME (small and medium enterprises), but implementation wise, when the money is being distributed, at the end of the day, we don't see the output…"
>
> (Participant 14, male, senior executive in the Accountant General Department)

"[The allocation for] education, to me is not enough especially in the rural areas, there are still areas with not enough schools to cater for their inhabitants…"

(Participant 19, female, statistician in the Department of Statistics)

"Of course the system and all is there to spend the money [which] the income taxpayer is paying, but the way they spent the money is a bit unfair, improperly managed, that's all, but the system is there. I know they're going to use the money for whatever development and all, but the way they managed the money is questionable…" (non-translated)

(Participant 30, male, bank officer)

Participants who commented on the lack of disclosure issue wanted more transparent statistics on the government's fund allocation. They argued that the lack of information had created negative perceptions among taxpayers on the government spending of tax revenues even though the government might have spent the money wisely. For instance, one participant (who had an intellectually disabled child) claimed that the government had provided facilities and assistance to disabled people but such assistance was not widely publicised. As such, there was a widespread misconception that the government did not care for this group of people. Thus, full disclosure of

the government spending of tax revenue was seen as one way of improving fairness perceptions among the taxpayers. For instance:

> "…till now, we don't exactly know the tax revenue that we pay is being used for what [purpose], we don't know. [We have] no information about that, yet we can see there are poor people and so on. What is the role of tax? Is it being channelled to these needy people, or just for development? Where it is being used? Where it is being invested? We don't know, [there is a] lack of information about that…I'm not happy with that…"
>
> (Participant 24, male, officer in the Employees Provident Fund)

> "I think many people do not know that the government has [provided] facilities to those who cannot work (e.g. disabled). Actually [the government] provides the assistance, the government is very concerned, [but] this needs to be publicised."
>
> (Participant 4, male, laboratory manager of a private hospital)

> "I don't know how much money they spend for this [benefits for the low-income people], we don't know, there's no information…disclosure is very important, and how much is the allocation; then we will be satisfied…"
>
> (Participant 9, male, lecturer at public university)

Despite the above comments, there were a number of participants (27 percent) who had confidence in the way the government spent the tax revenues. They felt that money was allocated efficiently for public infrastructure, employment, development and so on. However, proper reporting of such statistics had not been made available to the public. For example:

> "In terms of [government] expenditure, [I believe it is] certainly efficient."
>
> (Participant 3, male, officer in the Employees Provident Fund)

> "I think [government expenditure] is efficient…"
>
> (Participant 4, male, laboratory manager of a private hospital)

> "In terms of that [government expenditure] is certainly fair…I mean, now every taxpayer, including me should at least know what [it is] being spent on, how much is being used by the government. Until now, we only know the expenditure in general, for infrastructure, for education, for whatever, it is not enough, I mean, not clear enough."
>
> (Participant 25, male, officer of the Royal Customs Department)

"…we are not clear on the details but surely all tax revenues are for the country…"

(Participant 29, male, officer of the Employees Provident Fund)

8.3.1.2 Vertical Fairness

The implementation of the progressive tax rates (as an indication of vertical fairness) in Malaysia has been well accepted by the participants, where the majority of them had no adverse opinion on this issue. The results suggest not only that taxpayers were happy that high income earners were taxed progressively higher than middle income earners but also with the tax free threshold set out under the current income tax system. As at the year 2010, the Malaysian income tax system had a lowest tax rate of 1 percent with the highest tax rate being 26 percent. With regard to a taxable person, the Inland Revenue Board (IRB) of Malaysia had publicised on its website that only individuals who are earning an annual income of MYR25,501 (NZ$11,577) (after Employee Provident Fund (EPF) deductions of 8 percent) are required to register their tax file and consequently file tax return forms (Inland Revenue Board of Malaysia, 2010). In other words, those earning an annual income lower than the amount stated above are not required to pay any income tax at all. Some of the comments from participants were:

"…if you earn more income, surely you need to pay more [tax], if you earn less, you pay less [tax] and there are certain levels of income after taking into account the deductions, are not subject to tax…"

(Participant 2, female, senior executive in the Accountant General Department)

"This [income tax] system is fair, where low income earners mostly don't have to pay tax, high income earners pay more tax, and there is a balance between the high incomes and the low incomes."

(Participant 3, officer in the Employees Provident Fund)

While the majority were happy with the presence of vertical fairness, the only suggestion made by one participant to improve vertical fairness perceptions was to reduce the tax rate for the high income earners:

"…for me, I think for individual[s], government shouldn't enforce the tax rate too high…but they can impose that on the companies…" (non-translated)

(Participant 17, female, senior executive in the Accountant General Department)

8.3.1.3 Retributive Fairness

In Malaysia, the presence of retributive fairness was viewed as an important mechanism to reinforce compliance behaviour. In fact, the majority of participants believed that penalties would encourage taxpayers to comply with the income tax system. For instance:

> "…in terms of penalties, it is reasonable [to penalise] if [taxpayers] don't want to pay. We need one mechanism to increase their awareness of their responsibility to pay."
>
> (Participant 18, male, senior executive in the Pilgrimage Fund Board)

> "Penalties should be applied to encourage taxpayers to pay on time."
>
> (Participant 23, male, executive in Telekom Malaysia Berhad)

While agreeing to the imposition of penalties for late payments, one participant brought the issue of flexibility where the IRB was expected to have some discretion in dealing with taxpayers who genuinely could not pay on time. In his comment, he suggested:

> "For the late payment, we certainly need to impose a penalty but not too burdensome and taxing, perhaps in terms of the figure or the terms and conditions should be more flexible. Probably taxpayers

have difficulties in paying, so we give some flexibility to them." (non-translated)

(Participant 16, senior executive of the Pilgrimage Fund Board)

In relation to this issue, another participant suggested a double standard in the treatment between taxpayers in the salary and wages group and in the business group. Specifically, he suggested abolishing the penalty on salary and wage earners while maintaining such a penalty on self-employed people. This participant claimed that salaried taxpayers would eventually pay their taxes on their incomes upon their retirement where any unpaid taxes would be claimed by the IRB before the payment of gratuities was made. By contrast, self-employed people might have the chance to get away with taxes as long as they were not selected for a tax audit. In other words, there is greater possibility for self-employed people to escape paying tax permanently even after their retirement if their non compliance behaviour was not detected by the IRB in the tax audit:

"…[the IRB] should not impose a penalty on the salaried group because eventually they will pay their taxes…but for the other group [self-employed], perhaps they should be penalised because they don't have proper accounting documents [to keep track of their businesses]..."

(Participant 10, male, officer of the Royal Customs Department)

An argument raised by another participant in relation to the retributive fairness was the IRB's selection of taxpayers for a tax audit or investigation. In her opinion, the IRB tended to be more vigilant on investigating individual taxpayers rather than on companies that she believed were more active in pursuing tax evasion:

> "The penalty imposed, I think, for me [it is] okay except that, for the companies, they should [be penalised] because usually companies are the biggest culprit in terms of late payment and so on, so they [the IRB] should go after all those companies instead of going after small taxpayers like individuals. What's being practiced by IRB now is that they focus more on individual[s] rather than the companies." (non-translated)
>
> (Participant 17, female, senior executive in the Accountant General Department)

8.3.1.4 Administrative Fairness

The analysis of the interviews with participants reveals that they perceived administrative fairness of the income tax system, in terms of taxpayers' burdens concerning compliance, accuracy, ability to correct, duration for refunds of tax and friendliness of the IRB staff to be disappointing.

It is well-understood under a self-assessment system (SAS) that taxpayers are expected to voluntarily prepare and submit their tax return forms to the IRB within the stipulated time. However, this shift of responsibility from tax officers to taxpayers has created negative perceptions on the administration of the income tax system. Participants claimed that the lack of tax knowledge among taxpayers and the lack of assistance from the IRB staff made filing and submitting the tax return forms burdensome and stressful. For instance:

> "With the SAS, it requires us to know [how to do tax by] ourselves…in the big cities such as Kuala Lumpur, Kuala Terengganu, there are people who are educated and some who are not, so under the SAS, without the assistance from the IRB staff, people will get lost."
>
> (Participant 1, male, senior executive in the Accountant General Department)

In relation to this issue, another participant voiced her concern about the accuracy of the tax return forms submitted by taxpayers. When taxpayers were assumed to have insufficient knowledge of the income tax system, surely there was a possibility that they made mistakes when filing their tax return forms. However, the accuracy of the tax return forms could not be assured unless those taxpayers were randomly selected for a tax audit. For

other taxpayers who were not audited, the accuracy of their tax return forms remains unknown. This situation might create some injustice amongst taxpayers if the mistakes were unintentional. However, a negative perception might arise when the mistakes in the tax return forms were deliberate and the accuracy of the tax returns was not checked. For example:

> "…when we filled in [the tax return forms via] e-filing, it seems that the IRB simply accepts whatever was reported by the taxpayers. Whether the figure is correct or not, the IRB did not query…so the accuracy is not assured by the IRB."
>
> (Participant 2, female, senior executive in the Accountant General Department)

Another comment on administrative fairness related to the taxpayers' right to query and make corrections on the tax returns. Based on their experiences, participants argued that with the on-line filing system in place, they had lost their rights to enquire concerning any doubts they might have. Even if they were aware that they made mistakes when filing the tax return forms, they could not correct the error until the tax payment was paid. Such experiences led them to perceive the administration of the income tax system negatively, as reflected in their comments:

"…in terms of fairness, it's unfair because whatever is in the system, we cannot query, we have to simply follow the system. If we calculate manually, sometimes it is not the same as what is being assessed but we cannot query on that."

(Participant 15, male, statistician in the Department of Statistics)

"…and now with the SAS [e-filing], once we log in and send [the tax return form] and there is mistake with the figures, we cannot redo them, so if we made a mistake with any one figure, we have to pay [the tax] first [then, they will refund]…"

(Participant 18, male, senior executive in Pilgrimage Fund Board)

Participants in this study also indicated their dissatisfaction with the administration of tax refunds. They could not accept the fact that while the IRB had been very efficient in collecting tax a similar level of efficiency was not maintained when dealing with tax refunds. For example:

"…in terms of [tax] collection, they have improved a lot, but when we want to claim back [for a refund], I think it's too slow…"

(Participant 8, male, executive in Telekom Malaysia Berhad)

"Dealing with them [the IRB staff], they are helpful in the sense that, (although sometimes it is frustrating), because when we tell them

that we want to pay tax, they do it promptly because they say money is coming in, but if we say, how about my refund, then that will take time…" (non-translated)

(Participant 17, female, senior executive in Accountant General Department)

Another aspect of the income tax administration that annoyed the participants was the lack of friendliness of the IRB staff. Based on their experiences, they claimed that the IRB staff should be more friendly and sincere when dealing with taxpayers. Some of their comments in this regard are:

"Counter service is not good enough, not excellent but moderate. In terms of friendliness, they are not friendly; when we asked [questions], they don't answer in a friendly manner. Whatever facts they have are considered accurate, whatever facts that we bring to them, they don't want to accept."

(Participant 15, male, statistician in the Department of Statistics)

"It [the administration system] is not user-friendly, and sometimes we sent [the tax return forms] two or three times but they claimed they did not receive it."

(Participant 18, male, senior executive in Pilgrimage Fund Board)

8.3.2 Tax Knowledge

When analysing the data it was noticed that participants viewed their knowledge of the income tax system in three ways, namely: general knowledge, technical knowledge and legal knowledge. These dimensions of tax knowledge emerged when participants were asked about their degree of knowledge of the income tax system. With regard to their general knowledge, participants claimed that they knew their responsibility to pay tax every year and the role of income tax in the country, but they did not have a good grasp of the technical details of the income tax itself. For example:

> "I think my knowledge is not that good. I know that I have to fill a BE [tax return form for resident individuals without a business source] form every year for individual income tax…"
>
> (Participant 2, female, senior executive in the Accountant General Department)

> "It is a responsibility for a Malaysian resident; we have to pay income tax as determined by the Government of Malaysia…"
>
> (Participant 18, male, senior executive in Pilgrimage Fund Board)

In terms of knowledge, it seems that participants were more concerned about the ability of self-employed people to comprehend the technical

details of the income tax system. They believed that this group of taxpayers was very much in need of assistance, particularly from the IRB, to deal with their tax matters. With no assistance, the self-employed would be unable to comply even though they had every intention to do so:

> "Knowledge among the self-employed people, for example, small traders, entrepreneurs, lorry driver[s] with [their] own business, from that aspect [tax knowledge] they know nothing at all. If no one teaches them, they will not do [it]. They will not read [a] tax book, they will not read books related to tax filing…they are totally lost."
>
> (Participant 1, male, senior executive in the Accountant General Department)

In addition to self-employed people, taxpayers with no financial background were also seen as having problems with the technical aspects of the income tax. For instance, one participant highlighted the situation where an engineer might not know how to fill in his own tax return form because he had not enough knowledge on the technical details of the income tax system. He commented:

> "…even in big cities, if we asked an engineer, [he will reply], I don't know how to fill up the tax return form. He doesn't know [about

expenditure] that is tax deductible, rebates, insurance, double deductions, he doesn't know, everything he doesn't know."

(Participant 1, male, senior executive in the Accountant General Department)

For other participants who had an accounting background, whether from their tertiary education or work experience, technical knowledge of the income tax was not really a problem for them. While they claimed to have limited knowledge, they were able to fill in their return forms independently. In fact, one participant indicated that the knowledge of taxation obtained during her tertiary education had helped her to manage her tax affairs efficiently. For instance:

"…not comprehensive, minimal [knowledge], not 100%, but the BE form I can do [it myself]."

(Participant 3, male, officer in the Employees Provident Fund)

"My level of knowledge on tax was limited [to individual income tax], because I learnt accounting before; I learnt tax, so [I have good] knowledge towards individual tax, such as how to minimise…how to reduce the tax payment, such as when you pay your zakah [Islamic tax], you pay your insurance, something like that, you know

something like how to reduce your tax payment, but in a legal way." (non-translated)

(Participant 6, female, executive in Telekom Malaysia Berhad)

In terms of taxpayers' knowledge of the legal aspects of the income tax system, the majority of the participants claimed that they were aware of the penalty mechanism under the current income tax system but not of the details of it, such as the penalty rate. This is because they had no experience of being penalised under the current income tax system. Examples of the comments received are:

"I'm not really aware of the penalty, how much is the penalty and so on because every year I always send [the tax return form] on time and so on, so I'm not aware of the penalty." (non-translated)

(Participant 6, female, executive in Telekom Malaysia Berhad)

"I'm not aware of the penalty because I comply [with the income tax system]. I have tax deducted through the Scheduler Tax Deduction (STD), and then pay [tax] before the deadline, submit the tax return forms, so in terms of penalty, I'm not really aware but I do know that there is a penalty."

(Participant 14, male, senior executive in the Accountant General Department)

8.3.3 Tax Complexity

This study also sought to understand taxpayers' perceptions on the complexity of the income tax system. When interviewed, most of the participants claimed that the income tax system was not complex. They found it easy to fill and file the tax return forms especially when using the e-filing system. For instance:

> "…our [income] tax system is simple…not complex."
>
> (Participant 1, male, senior executive in the Accountant General Department)

> "…filling up the form is easy because it is available in the internet, we just fill in the blanks and then just follow the procedures. We simply fill up whatever information required, and then send, we follow instructions, no problem in that sense."
>
> (Participant 2, female, senior executive in the Accountant General Department)

While agreeing with the comment that the income tax system was simple, some participants further argued that it might only be true for salaried taxpayers. In other words, they were suggesting that the income tax system might be complex for self-employed people who had to deal with a lot of tax computations. Their comments were:

"It [the income tax system] is not complex actually…for the business may be [complex], because for business there a lot of computations, like what kind of expenses which are deductible, what expenses to add back, for a business probably a little bit difficult."

(Participant 6, female, executive in Telekom Malaysia Berhad)

"It is not difficult. I think everyone can do it and [is] able to understand how to do it especially the salaried group people, we have the standard format from our employer, we just follow, unless if I have a business, it might be difficult. But for a salaried person like me, I think that [tax return form] can be completed in less than 10 minutes."

(Participant 8, male, executive in Telekom Malaysia Berhad)

8.3.4 Compliance Behaviour

When asked about their perceptions on tax compliance behaviour, some participants generally viewed taxpayers as opportunistic. They claimed that it was human nature to manipulate the tax system if the chances to do so were available. However, for some participants, they would hesitate before being non-compliant when considering the penalty imposed if they were caught:

"…in terms of compliance, I think everyone wants to avoid, I mean not avoiding legally but illegally, they evade and don't want to pay [tax], if they can avoid paying, they will. When there are chances to manipulate, they will manipulate…"

(Participant 1, male, senior executive in the Accountant General Department)

In discussing taxpayers' compliance behaviour, participants tended to split taxpayers into two groups, namely salary and wage earners and self-employed people. In their comments they firmly believed that salary and wage earners group was the most compliant group of taxpayers since they had little chance to avoid or evade paying tax. This statement is supported by the fact that the IRB has complete records on the annual incomes and deductions of every single salaried taxpayer provided by their respective employers. Thus, the IRB has the ability to trace them easily should they try to avoid or evade paying tax. On the other hand, self-employed people were perceived to have more ways of avoiding and evading tax due to inadequate documentation of the business held by the IRB. A comment from participants included:

"…we, the salaried people, certainly cannot run away [from paying tax], but those who are self-employed or who own businesses, they have various means to get away with it…"

(Participant 8, male, executive in Telekom Malaysia Berhad)

To provide evidence of non-compliance among the self-employed, one participant highlighted cases of multi-level marketing millionaires who escaped paying tax since the IRB failed to trace their annual incomes as a result of improper business records. She commented:

"I found that those with no fixed incomes such as entrepreneurs, self-employed, the IRB could not trace these people. I've seen millionaires, entrepreneurs who did not pay tax, and even if they pay, it is not proportionate to what they earned…"

(Participant 7, female, executive in Telekom Malaysia Berhad)

In relation to the non-compliance of self-employed people, one participant shared his experience from chatting with self employed taxpayers who clearly admitted to have evading tax by manipulating their business records. In these two cases, they pointed out how they had overstated their business expenses to accommodate their personal life-style and private expenditure. He commented:

"…my relative, he is a businessman, I asked him why do you buy so many [luxury] cars? This is under my company, he said, so I can deduct my expenses. So he's driving a luxury car but can deduct it from his business tax, all big cars, four cars, all are either Mercedes or BMWs…we don't think it's fair to put their money on [luxury cars]…he used the cars for personal [purpose] not for business, but claimed as company's cars…no tax audit…my Chinese neighbour is like that too. Vacation; he puts the vacation expenses as business expenses to avoid taxes. These are real."

(Participant 9, male, lecturer at public university)

When probed further on the possible explanation for the non-compliance behaviour among certain taxpayers, participants suggested four reasons namely: attitude, perceived behavioural control, tax knowledge and fairness perceptions. From the interviews in this study, there was a shared belief among the participants that taxpayers' attitudes were an influential factor to their decision not to comply. Specifically, one participant claimed that laziness and a lack of awareness among her friends led them to not complying. Further, another participant suggested that some taxpayers were very determined not to comply with their tax obligations and such attitudes could not be easily altered even with a simpler tax system. Participants' comments included:

"…based on the people around me, my colleagues, they are lazy to do the e-filing…a lack of awareness…"

(Participant 2, female, senior executive in the Accountant General Department)

"…most of these people, they are trying to evade tax. It is not because of the system, whatever the system you put in, how friendly it is, they are still trying not to pay the government [the IRB]…it's the attitude of the people." (non-translated)

(Participant 30, male, bank officer)

Another possible explanation for the non-compliance behaviour suggested by the participants was perceived behavioural control. In relation to this, participants believed that some taxpayers, particularly business people, had a clear ability to avoid or evade tax mainly due to the use and accessibility of their tax consultants as indicated in the following comment:

"…the wealthy business owners, it's easy for them [to avoid or evade tax] because they have their own tax consultants [if] they want to adjust the figures here and there…"

(Participant 2, female, senior executive in the Accountant General Department)

While the purpose of engaging a tax consultant is supposedly to assist taxpayers meeting their tax obligations, undeniably, however, there is a common belief among participants that some tax consultants have misused their knowledge of taxation to facilitate their clients in avoiding and/or evading tax. Being aware of the possibility that such practices may grow, if no control mechanism is put in place, the IRB has been proactive by legislating additional provisions in the Income Tax Act 1967 that both taxpayers and tax consultants will be equally responsible and liable for a similar penalty in the event of tax avoidance and/or evasion.[111] In other words, these provisions generally require tax consultants to exhibit honesty and due care in carrying out their duties.

Tax knowledge had also been discussed as a potential factor contributing to non-compliance behaviour. Interestingly, participants had different views on how the level of tax knowledge affected taxpayers' decisions not to comply. From the first perspective, participants argued that limited or complete absence of tax knowledge had caused unintentional non-compliance behaviour, as suggested by the comments:

[111] Section 121(2) of the Income Tax Act 1967 states that any person who aids, abets or incites another person to commit an offence under Section 113, 115, 116 or 118 shall be deemed to have committed the same offence and shall be liable to the same penalty. The sections are related to filing incorrect returns, leaving Malaysia without payment of tax, obstruction of officers and offences by officials, respectively.

"… [some taxpayers do not comply but] not so intentionally. It is due to the level of their understanding [on the income tax knowledge]."

(Participant 7, female, executive in Telekom Malaysia Berhad)

"Their knowledge; [they have] no knowledge about that [tax], that's why they don't pay; they have no knowledge [of the income tax]."

(Participant 15, male, statistician in the Department of Statistics)

The other perspective suggested was that possessing good knowledge of taxation could also motivate taxpayers not to comply. In this case, participants argued that knowledgeable taxpayers had the ability to exploit whatever loopholes in the income tax system for their financial advantage. This opportunity was even made possible with the availability of tax advisors at a reasonable cost. In other words, participants were suggesting that good knowledge of the income tax would improve taxpayers' perceived behavioural control over non-complying with their tax obligations, which was consequently demonstrated by their deliberate unlawful actions.

In short, these comments suggest that taxpayers with either too little or too much knowledge would be equally motivated to engage in non-compliance behaviour. In this situation, the IRB should be treating the non-compliant

taxpayers differently depending on their circumstances. The target group that the IRB should really focus on is the deliberate non-compliant taxpayers, where appropriate penalties should be imposed. While for the unintended non-compliant taxpayers, advice and consultation is more appropriate. An example of the comments received is:

> "People who know how to get away from tax, they actually have good knowledge…they have high incomes but they know the loopholes to manipulate and now they can seek advice from the tax advisors at reasonable costs…so those with good knowledge will evade…"
>
> (Participant 20, male, officer in the Royal Customs Department)

The other rationale suggested by participants for non-compliance behaviour among taxpayers was their negative perceptions on the fairness of the income tax system. In the interviews participants repeatedly mentioned how taxpayer's fairness perceptions, particularly on government expenditure, had motivated them to evade paying tax. Even though they were aware that tax evasion was illegal, they defended their actions by putting the blame on the government that did not manage the tax revenue efficiently, as highlighted in their comments:

"…why should I give tax when I don't know how it is spent…" (non-translated)

(Participant 13, executive in Telekom Malaysia Berhad)

"…I think they feel that the income tax system is not being fair to them, they think that they are paying too much, they don't see they get anything out of it, in that sense it might be possible [to not comply]…" (non-translated)

(Participant 17, female, senior executive in the Accountant General Department)

"…some people are still trying to evade tax…partly because of the way money is being spent and they are not happy with that; why should they pay [tax] when money is not properly used…"

(Participant 30, male, bank officer)

8.3.5 Tax Knowledge, Tax Complexity and Fairness Perceptions

In the final part of the interviews, participants were probed on the role of tax knowledge and tax complexity in taxpayers' fairness perceptions. The results indicate that some participants agreed that tax knowledge had an effect on fairness perceptions. Specifically, they suggested that a lack of tax knowledge among taxpayers had caused taxpayers to perceive the income tax system as unfair. Such a positive relationship between tax

knowledge and fairness perceptions indicated that taxpayers' fairness perceptions could be improved when they had sufficient knowledge about taxation. This can be achieved by disseminating tax knowledge through various channels, such as the formal education system, either in schools or universities, seminars, and any other possible ways (such as via newspapers, advertisements, and the like) of creating awareness among the taxpayers. For instance:

> "I think it's possible for those with no knowledge of tax, they feel that this [income tax] is not fair, they think it is difficult."
>
> (Participant 6, female, executive in Telekom Malaysia Berhad)

> "…income is always defined as our possession, our income, our business, our money, so to those with lack of knowledge or little knowledge they feel that it is a burden to them because the money that they earned needs to be paid back [in terms of tax]…"
>
> (Participant 20, male, officer in the Royal Customs Department)

Unlike tax knowledge, tax complexity was perceived to have no effect on fairness perceptions. As discussed earlier, participants consistently believed that the income tax system was simple especially for the salary and wage earners group. Thus, they could not associate such simplicity with their negative perceptions of the income tax system. In addition, as

salaried taxpayers, they had not experienced the complexity of the income tax system to enable them to conclude that tax complexity would affect their fairness perceptions. In short, the results from interviews indicate that Malaysian participants formed their fairness perceptions based on the level of tax knowledge but not the complexity of the tax system.

8.4 New Zealand vs. Malaysia

With reference to thematic analysis of the interviews with New Zealand (as discussed in Chapter 7) and Malaysian participants, the results from the two countries are then summarised and compared to ascertain if the opinions differ.

Relatively, in terms of overall perceptions of fairness of the income tax system, the results indicate that Malaysian participants had better perceptions compared to New Zealand participants. This situation was observed when participants responded to an initial question on their perceptions on the income tax system. All participants in Malaysia expressed their favourable opinions while there were mixed views offered by the New Zealand participants. Such a differing opinion is possibly due to the mix of participants in New Zealand, compared to Malaysian participants who consist of all salaried taxpayers. While it is arguable that the mix of participants might have an impact on their responses in New Zealand, and thus the results might not be necessarily compared directly, it

is important to note that, in a broader sense, participants in both countries are all individual taxpayers, irrespective of their sources of income. In addition, unlike in New Zealand, salary and wage earners in Malaysia are required to file tax returns. On this basis, participants in both countries have considerable exposure to filing tax returns and therefore are believed to be capable of providing views on the fairness perceptions and relevant topics in this study.

Interestingly, when probed further on their fairness perceptions of the income tax system, participants in New Zealand and Malaysia appeared to have a common interest in discussing four aspects of fairness perceptions, namely: general fairness, vertical fairness, retributive fairness and administrative fairness.[112] With regard to the perceptions of general fairness, participants in New Zealand and Malaysia had considerable concerns about government spending and disclosure issues. In these respects, governments were expected to be more efficient and transparent.

[112] During the interviews, some of the participants immediately mentioned the areas of concerns on the income tax system when a general question of fairness perceptions was asked. This indicates their clear understanding of the fairness perceptions of the income tax system. While to other participants, who were not clear on the topic of fairness perceptions and needed some guidance, the researcher had to brief them on the various aspects of the income tax system (e.g. vertical fairness, administrative fairness, etc.) that might be of interest for them to discuss. In doing so, however, participants were given full autonomy to independently describe their perceptions to any dimensions of fairness perceptions that might be more relevant to them. To minimise the possibility of bias, the researcher, before concluding the interview sessions, asked general questions on any suggestions to improve the income tax system and any general comments on the income tax system participants may wish to make. These questions were posited in order to encourage participants to reiterate their thoughts, which indirectly indicated their emphasis on certain aspects of the income tax system.

The issue of vertical fairness that were raised by New Zealand participants included the inequitable progressive tax rates between the wealthy and the poor, the unfair treatment between self-employed people and the large corporations, and tax on the secondary employment. In contrast, the Malaysian participants appeared to be happy that vertical fairness was properly maintained. In terms of retributive fairness, both New Zealand and Malaysian participants agreed with the necessity of penalty mechanisms to reinforce tax compliance amongst taxpayers. They further argued that such punishments would only be fair if the penalty imposed matches the committed offences. Having said that, participants desired some flexibility from the tax authorities especially when dealing with genuine mistakes. In addition, New Zealand participants also desired equivalent treatment between taxpayers and tax authority. In this situation, participants expected similar penalties for the mistakes regardless of whether those mistakes were committed by taxpayers or by the tax authority.

The discussion on the administrative fairness among New Zealand participants concentrated on the issues of accessibility to the tax authority, responsibility to administer tax matters, friendliness of the tax authority staff and the decision-making process. New Zealand participants' criticisms were partly shared with Malaysian participants, who also had negative comments on the shift of responsibility from the tax authority to

taxpayers in administering the tax matters, and staff friendliness. Furthermore, Malaysian participants had expressed their dissatisfaction with the administration of the income tax system in terms of ability to correct errors and timeliness of tax refunds. In addition to these four dimensions of fairness, New Zealand participants were also concerned with the personal fairness issue where they were not happy with the current tax rates and secondary taxation.

New Zealand and Malaysian participants had similar views when discussing their knowledge of the income tax system. In both environments, participants had a level of general knowledge about the income tax system, such as their responsibility to pay tax, the purpose of the income tax and the relevant tax rates. The interviews further highlighted the fact that the lack of knowledge of the technical aspects of the income tax system mainly worried the self-employed taxpayers, who need to deal with a lot of tax computations and forms. The legal aspects of the income tax system, however, did not receive much attention in the discussion, which is possibly due to inadequate knowledge amongst taxpayers or the relatively little significance attributed to the subject by participants.

The results of the taxpayers' perceptions on complexity of the income tax system indicated a consistent opinion between New Zealand and

Malaysian participants. In their comments, they believed that the system was simple for salary and wage earners who have no other sources of income. However, this was not the case for self-employed taxpayers who had to deal with the complexity of the income tax system in meeting their tax obligations.

A consistent opinion among New Zealand and Malaysian participants was also demonstrated with regard to their perceptions of compliance behaviour. They commonly agreed that there were non-compliant taxpayers, especially among the self-employed people in both countries. The contributing factors to non-compliance were: attitude, perceived behavioural control, tax knowledge and negative fairness perceptions. New Zealand participants also considered tax complexity as an additional factor. In the final part of the interviews, participants were asked to comment on the possible effects of tax knowledge and tax complexity on fairness perceptions. In response, participants in both New Zealand and Malaysia indicated a positive relationship between tax knowledge and their fairness perceptions, where better knowledge of income tax would improve taxpayers' perceptions. On the other hand, an inverse relationship between the complexity of the income tax and fairness perceptions was only reported by New Zealand participants.

8.5 Summary

In this chapter the results from interviews conducted in Malaysia were presented and compared with the New Zealand interviews. The results suggest that Malaysian participants had concerns on three aspects of fairness perceptions, namely: general fairness, retributive fairness and administrative fairness. In particular, participants were dissatisfied with the government spending of tax revenues, a lack of disclosure of government expenditure, imposition of penalties on genuine mistakes, taxpayers' right to query and make corrections, administration of tax refunds and friendliness of the IRB staff.

In terms of their knowledge of the income tax system, Malaysian participants appeared to have limited knowledge on the technical aspects of income tax system. Yet, they found it easy to fill and file their tax return forms. This is possible with the availability of the e-filing which automatically calculate taxpayers' tax liability. By using e-filing, taxpayers are only required to fill in the relevant figures (based on the summary of incomes and deductions provided by their employers) in electronic forms. However, participants did express their concern over the ability of self-employed taxpayers and taxpayers with no financial background (such as engineers) to comprehend the technical details of the income tax system.

In terms of complexity of the income tax system, participants argued that the system was simple for salaried taxpayers but not for the self-employed group who had to deal with a lot of tax computations. For instance, without the knowledge on taxable incomes and expenses which are eligible for deductions, it would be difficult for the self-employed to compute their own tax liability.

With regard to compliance behaviour, participants viewed taxpayers as opportunistic, especially self-employed people who had more chances to avoid or evade paying tax. This is particularly true when the IRB had inadequate documentation of the business as in the case of multi-level marketing millionaires. Among the possible explanations for non-compliance behaviour expressed in the interviews, were attitude, perceived behavioural control, tax knowledge and fairness perceptions.

Subsequently, in the final section of the chapter, the results from both New Zealand and Malaysia were compared. Key topics identified include fairness perceptions, tax knowledge, tax complexity and compliance behaviour. From the discussion, it appeared that participants generally had similar views on certain issues, such as perceptions on general fairness, administrative fairness and their effects on compliance behaviour. In the next chapter, a comprehensive discussion integrating the results from both the survey and interview data will be presented.

Chapter 9

Discussions and Implications of the Study

9.1 Introduction

This chapter presents a detailed discussion of the factors under study by integrating the results from both the New Zealand and Malaysian surveys and interviews. It begins with a discussion of the preliminary hypotheses to investigate whether any differing perceptions exist between New Zealand and Malaysian taxpayers.[113] This is followed by a discussion of the primary hypotheses which were developed to understand the role of fairness perceptions and other relevant variables on taxpayers' compliance behaviour. The chapter concludes with a discussion of the implications of the study.

9.2 Discussion on the Preliminary Hypotheses

This section presents a discussion on how taxpayers in New Zealand and Malaysia perceive the fairness of their income tax systems, their tax knowledge, the complexity of their respective income tax system and their compliance behaviour. The discussion, which is essentially drawn from the survey results in Chapter 5 (refer section 5.3.3 on the *t*-test analysis) and the interview results, intend to assist in understanding whether there are

any differing opinions between the taxpayers in their respective environments. Furthermore, by integrating the two approaches, it allows the researcher to better evaluate and explain the findings so as to consequently be able to answer the relevant research questions in the study.

9.2.1 Fairness Perceptions

The results from the *t*-test analysis (in Chapter 5, section 5.3.3.1), comparing the fairness perceptions between New Zealand and Malaysian taxpayers, indicate that they had significantly different levels of perceptions. The findings provide support for the previous studies which documented various levels of fairness perceptions across countries (for example, Etzioni, 1986; McKerchar, 2003; Richardson, 2005a; 2005b; 2006b; Verboon & Dijke, 2007). Relatively, Malaysian taxpayers who perceived their income tax system as moderately fair in every dimension,[114] appear to have better perceptions compared to their New Zealand counterparts, except in the case of retributive fairness and horizontal fairness. For retributive fairness, almost similar perceptions were held by taxpayers in New Zealand and Malaysia. In relation to horizontal fairness, the results suggest that New Zealand taxpayers were

[113] It is important to note that the term 'taxpayers' in this study reflect a sample of more diverse groups of individual taxpayers in New Zealand and a sample of salaried and wage earners in Malaysia. Also, the taxpayers were compared based on their perceptions on their own income tax system.

more convinced than Malaysian taxpayers that taxpayers in similar economic positions are taxed similarly. This may be explained that, unlike in New Zealand, the income tax system in Malaysia provides taxpayers with relief, rebates and tax credits, before arriving at their final tax liability. Thus, they might perceive that taxpayers in similar economic positions might not be taxed at similar rates due to the availability of such deductions. Such perceptions reflect the reality of the income tax system where the rule of horizontal fairness is breached in order to achieve social goals (Holmes, 2001). Furthermore, Holmes (2001) suggests that it is common for each income tax system in the world to compromise horizontal fairness to some degree with other prevailing objectives or principles.

Contrary to the findings reported in Hasseldine et al. (1994), that the New Zealand income tax system is perceived as almost completely unfair, the present study suggests that taxpayers' perceptions on horizontal fairness, vertical fairness, retributive fairness and personal fairness were generally favourable. These contrasting results should be anticipated as the New Zealand income tax system has changed appreciably since 1994 when the previous study was conducted. However, New Zealand taxpayers were found to have negative perceptions concerning general fairness, exchange

[114] The findings extend the evidence in Azmi and Perumal (2008) who claim that Malaysian taxpayers perceive the tax system as fair with respect to general fairness, tax structure and self-interest.

fairness and administrative fairness. In particular, taxpayers were not happy with the government's spending of the tax revenue and their share of tax burden (general fairness), benefits received in return for their tax paid (exchange fairness), and the administration of the tax system by the tax authority (administrative fairness). This is generally consistent with Tan (1998) who concludes that taxpayers had positive perceptions on personal fairness but not on their share of the tax burden.

The findings from the interviews further explain that Malaysian taxpayers had better perceptions of their income tax system compared to New Zealand taxpayers. In particular, New Zealand taxpayers seemed to be more frustrated with their income tax system compared to Malaysian taxpayers when discussing their concerns about vertical fairness, retributive fairness and personal fairness. Likewise, New Zealand taxpayers also criticised several aspects of administrative fairness – criticisms were partly shared with Malaysian taxpayers. The only dimension of fairness that both New Zealand and Malaysian taxpayers appeared to commonly agree was general fairness, where taxpayers in both countries considered government expenditure of tax revenues and the transparency of government spending to be disappointing. Their perceptions of horizontal fairness and exchange fairness, however, could not be clearly drawn from the interviews since taxpayers in both countries were silent on these issues. Logically, this might indicate that taxpayers

were generally happy with these two aspects of fairness, and therefore did not feel the need to comment.

The results from the surveys suggest that New Zealand and Malaysian taxpayers had significantly different levels of fairness perceptions of their income tax systems. The findings answer the first research question: *'Do taxpayers in both New Zealand and Malaysia have the same level of fairness perceptions of their current income tax systems?'* in the negative. Additionally, explanations given during the interviews provide valuable information for this study on the detailed aspects of each dimension of fairness that had been the interviewees' source of frustration.

9.2.2 Tax Knowledge

The results from the survey presented in Chapter 5 suggest that both New Zealand and Malaysian taxpayers had good levels of knowledge of their respective income tax systems. With respect to the Malaysian environment, the results are consistent with Kamaluddin and Madi (2005), and Madi et al. (2010), but contrary to Loo and Ho (2005). Relatively, New Zealand taxpayers appeared to be significantly more knowledgeable on all aspects (general, technical and legal) of their income tax system compared with Malaysian taxpayers. The possible explanation for these findings is that respondents in Malaysia comprised solely salaried taxpayers where their tax filing is relatively simple, compared to those

with business incomes and other investment incomes. Furthermore, information on annual income, deductions and the like are provided by their employers prior to filing their tax return forms. This is even made easier with the e-filing (online electronic filing) where the taxpayers are simply required to fill in the information relating to their incomes and possible deductions, and the computation of the tax liability is automatically performed by the system. In that respect, perhaps, respondents felt that their limited knowledge of tax is adequate for them to comply with their tax obligations, and therefore were less likely to seek more information on the income tax system. In New Zealand, on the other hand, some of the respondents were self-employed or earned investment incomes which require them to have more knowledge of the income tax system in the process of filing their tax return forms. Even in the case of salaried taxpayers, they are probably in need of more knowledge of tax to ascertain if they have an entitlement to tax refunds.

The findings from interviews provide detailed information to the results obtained from the surveys. For instance, taxpayers in both New Zealand and Malaysia who claimed to have a good level of general knowledge of their income tax systems were actually referring to their knowledge about responsibility to pay tax, the purpose of tax and the tax rate(s).

With regard to technical knowledge, a number of taxpayers in both countries expressed their concern that the lack of knowledge among self-employed taxpayers caused difficulty for them to deal with tax matters. In Malaysia, such a lack of knowledge was also evident among salary and wage taxpayers who had no financial background knowledge. This reflects a lower level of knowledge among Malaysian taxpayers compared to their New Zealand counterparts as indicated in the survey. In terms of the legal aspects of the income tax system, taxpayers seemed to be generally aware of the penalty mechanisms but not so much of the details, especially so in Malaysia. At this point, it can be concluded that the surveys (supplemented by the interviews) provide evidence of different levels of knowledge among taxpayers in New Zealand and Malaysia, and therefore this answers the second research question expressed as: '*Do taxpayers in both New Zealand and Malaysia have the same levels of tax knowledge of their current income tax systems?*', in the negative.

9.2.3 Tax Complexity

The surveys of New Zealand and Malaysian taxpayers indicates that New Zealand taxpayers perceived the income tax system as significantly more complex than Malaysian taxpayers, particularly in terms of content complexity. While the results suggest that Malaysian taxpayers also have concerns with the complexity of the content of the tax law and provide support for Mustafa's findings (1996), New Zealand taxpayers appeared to

be more discontented with this issue. The findings do not suggest that the tax simplification and rewrite programme (which had been actively undertaken in New Zealand) is ineffective, but perhaps, the benefits from such programmes are not yet well absorbed, as suggested by Sawyer (2007). Contrary to the problem in understanding the tax law (content complexity), taxpayers in both countries commonly agreed that complying with their obligations is relatively less complex.

While such results might be inconsistent, the interview results are able to provide some explanation to why that happens. From the interviews, it appears that taxpayers discussed the complexity of the tax system in respect of their sources of incomes. While complying with the tax law is not difficult for salaried taxpayers, it is clearly complex among self-employed taxpayers and those earning investment incomes. These groups, especially the self-employed, have to deal with onerous tax matters in meeting their tax obligations. Thus, the claim that complying with the tax law is relatively easy (as demonstrated in the surveys) might only hold true in the case of the salaried group. In sum, these findings provide evidence of tax complexity in New Zealand and Malaysia, which differ to some extent, and thus positively answers the third research question: '*Do taxpayers in both New Zealand and Malaysia have the same levels of perceptions of the complexity of their current income tax systems?',* in the negative.

9.2.4 Compliance Behaviour

Overall the descriptive analysis performed in Chapter 5 on the TPB elements to measure compliance behaviour signals a reasonable degree of compliance among taxpayers in both countries. Relatively, New Zealand taxpayers are more compliant, compared to Malaysian taxpayers, in both scenarios under study.

To restate, this study investigates taxpayers' compliance in the 'overstating business expenses' and 'understating other incomes' scenarios. Even though the measures used are different, the results provide support to Belkaoui's (2004) comparative work, which suggests that New Zealand is the second most compliant nation after Singapore. In his study, Malaysia was ranked eighth out of 30 countries. Notwithstanding such a different level of compliance, taxpayers in both environments shared similar views such that the salaried taxpayers are more compliant than the self-employed taxpayers, because they have no choice but to comply. The self-employed taxpayers, on the other hand, appeared to have more opportunity to avoid or evade paying tax by manipulating their incomes and expenses related to their business. This is made easier when the revenue authority has not received adequate documentation of the business activities. Collectively, the findings from the survey and interviews answer the fourth research question: *'Do taxpayers in both New Zealand and Malaysia have the same levels of perceptions in relation to the TPB elements?',* in the negative.

9.3 Discussion on the Primary Hypotheses

With reference to the results from the structural model, this section presents a discussion on the factors affecting taxpayers' compliance behaviour in New Zealand and Malaysia. In addition, a discussion on the impact of tax knowledge and tax complexity on fairness perceptions and taxpayers' perceived behavioural control are also presented. This is followed by a discussion on the effect of fairness perceptions on attitudes towards compliance. The discussions on the surveys are integrated with the interview results to enable the researcher to provide a comprehensive evidence to review the research questions.

9.3.1 Fairness Perceptions are Multi-dimensional

The evaluation of the first order factor Measurement Model in Chapter 6 (refer section 6.3) confirms that New Zealand and Malaysian taxpayers perceived the fairness of their income tax system from various dimensions. The findings substantiate the previous exploratory studies on fairness perceptions undertaken across countries (for example, Azmi & Perumal, 2008; Christensen et al., 1994; Gerbing, 1988; Richardson, 2005a; 2005b; 2006b; Tan, 1998). Through rigorous validity and reliability tests recommended in the Partial Least Squares (PLS), the multi-dimensional perceptions of fairness were analysed under both tax compliance scenarios. The results jointly suggest that general fairness, exchange fairness, horizontal fairness, retributive fairness, and administrative fairness, are the

dimensions that were significantly important to New Zealand taxpayers in forming their fairness perceptions. Less attention, however, was given to vertical fairness and personal fairness. In Malaysia, all dimensions of fairness were significant with the exception of exchange fairness. While taxpayers' opinions on the dimensionality of fairness perceptions were not directly sought during the interviews, their concerns on various aspects of the income tax system (such as on tax administration and penalty mechanisms) indicate the presence of multi-dimensional perceptions in both countries. Thus, notwithstanding the slight differences between countries, the results imply that New Zealand and Malaysian taxpayers viewed fairness perceptions as multi-dimensional, and consequently this provides support to Hypothesis 5 which states: *'New Zealand and Malaysian taxpayers perceive fairness of their income tax systems as being multi-dimensional.'*

9.3.2 Factors Affecting Compliance Behaviour

Referring to the conceptual framework developed and validated in Chapter 3 (see Figure 3.1), this study argues that taxpayers' decisions whether to comply or not are the results of their fairness perceptions, attitudes toward compliance, subjective norms and perceived behavioural control. These relationships were tested in Hypotheses 6, 7 (both 7a and 7b), 8 and 9, respectively. Considering the predictive power of the structural model tested in the 'overstating business expenses' scenario presented in Chapter

6, the R^2 were 0.491 and 0.526 for New Zealand and Malaysia, respectively.[115] The values indicate that all these factors explained 49.1 and 52.6 percent of the compliance behaviour in New Zealand and Malaysia, respectively.

Interestingly, the results were consistent across countries, where affective attitude and subjective norms were found to be the only two factors which significantly affect taxpayers' compliance behaviour. These results provide support to Hypotheses 7a (affective attitude) and 8 (subjective norms) only. The positive path coefficient between affective attitude and compliance behaviour implies that a stronger affective attitude towards compliance results in better compliance behaviour. Similarly, higher subjective norms among taxpayers also result in better compliance behaviour. Referring to the path coefficient values, affective attitude (0.560 and 0.458 for New Zealand and Malaysia, respectively) had a much stronger influence on compliance behaviour than subjective norms (0.192 and 0.388 for New Zealand and Malaysia, respectively) in both environments.

These findings were confirmed by the results of the analysis of effect size (as discussed in Chapter 6, section 6.5.2). From the analysis, it appears that

[115] It is important to note that the results were indirectly compared as the structural model was not tested simultaneously but independently for each environment.

the omission of affective attitude in the New Zealand environment resulted in the decrease of the predictive power from 49.1 percent to 28.1 percent, which is considered to be a large effect. The omission of subjective norms, on the other hand, only had a small effect in decreasing the predictive power from 49.1 percent to 46.5 percent. A similar trend was documented in Malaysia where the omission of affective attitude appeared to have higher impact on the predictive power of the model (reducing from 52.6 percent to 38.2 percent), compared to subjective norms (reducing from 52.6 percent to 43.8 percent). Applying the degree of effect suggested by Cohen (1992), both factors were considered to have a medium effect on the predictive power of the structural model.

As this study investigates taxpayers' compliance in two different scenarios, similar hypotheses (Hypotheses 6 to 9) were re-tested using the same compliance structural model but in the 'understating other incomes' scenario. The analysis shows some interesting results. The predictive power of the structural model is greater in this scenario with 74.0 and 65.2 in New Zealand and Malaysia, respectively. Similar to the 'overstating business expenses' scenario, the results were very consistent between countries. All factors were found to significantly affect compliance behaviour except for instrumental attitude in New Zealand, which showed a non-significant impact, suggesting acceptance of Hypotheses 6, 7 (7a in New Zealand, and both 7a and 7b in Malaysia), 8 and 9.

The positive path coefficient between fairness perceptions and compliance behaviour implies that improved fairness perceptions result in higher compliance behaviour. Similarly, stronger affective attitude, instrumental attitude (particularly in Malaysia), and subjective norms would also result in higher compliance. On the other hand, a negative path coefficient between perceived behavioural control and compliance behaviour suggests that having a high control over avoiding or evading tax results in lower compliance behaviour among taxpayers in both environments.

Referring to the path coefficient values, affective attitude and subjective norms were considered the most important factors in both countries, followed by perceived behavioural control (in New Zealand), and fairness perceptions (in Malaysia) as the third important contributing factor. The analysis of effect size was used to confirm the strength of each factor in the structural model, where affective attitude was found to have a large effect on the structural model in New Zealand. The omission of affective attitude in the structural model results in decreasing the predictive power by 11.5 percent. While excluding the subjective norms from the structural model had a medium effect on the predictive power of the model, the omission of either perceived behavioural control or fairness perceptions had a small effect.

In Malaysia, similar findings were reported as for the 'overstating business expenses' scenario, where the omission of either affective attitude or subjective norms would result in medium effect on the predictive power of the structural model. In addition, the exclusion of fairness perceptions also had an effect but to a small degree. While instrumental attitude was found to be significant in the complete structural model, the effect size analysis indicates no material effect if that factor was taken out of the model.

This situation perhaps could be explained by the fact that in this study, instrumental attitude was treated as a moderating variable between fairness perceptions and compliance behaviour. In the complete structural model, fairness perceptions might have influenced instrumental attitude, which consequently affected compliance behaviour. However, when instrumental attitude was omitted from the structural model (in the effect size analysis), fairness perceptions still had both a direct and an indirect effect (through affective attitude) on compliance behaviour. Thus, the omission of instrumental attitude alone had no material effect on the explanatory power of the structural model. In other words, the study's results suggest that, without the effect of fairness perceptions, instrumental attitude might not be an important factor affecting compliance behaviour.

Similar to instrumental attitude, perceived behavioural control was also a significant contributing factor to compliance behaviour, but its omission

from the structural model (in the effect size analysis) indicates no material effect. Possible explanations for such findings are the low value in path coefficient and also the low degree of significance which only applies at the 0.1 levels.

Comparing the two scenarios under study suggests that the compliance structural model developed in this study fits the compliance situations in both New Zealand and Malaysia, with considerably high predictive power (especially in Scenario 2), compared to previous studies (for example, Bobek, 1997; Hanno & Violette, 1996; Trivedi et al., 2005). Furthermore, the results indicate that taxpayers in both New Zealand and Malaysia generally had similar views with regard to the factors affecting their compliance behaviour. Notwithstanding their differences in perceptions of fairness, tax knowledge, and complexity of the income tax system, the two groups of taxpayers commonly believed that affective attitude and subjective norms were the important reasons why people comply. Such understanding is consistent irrespective of the compliance situation the taxpayers encountered. This is consistent with previous studies undertaken overseas (for example, Bobek, 1997; Hanno & Violette, 1996; Trivedi et al., 2005).

Interestingly, more explanations of the influential factors to compliance behaviour were offered in the 'understating other incomes' scenario. In

particular, the results imply that fairness perceptions and perceived behavioural control had a significant impact on compliance behaviour in both countries. In addition, Malaysian taxpayers also considered instrumental attitude to be significant.

A possible reason that might explain such different findings is the distinct nature of the scenarios, where the first scenario is concerned with 'overstating business expenses', while the second scenario concerns 'understating other income'. Logically, comparing the two scenarios, the 'understating other incomes' scenario placed taxpayers in more flexible positions to either comply or not comply with their tax obligation than the 'overstating business expenses' scenario. Also in this scenario, other incomes are in the form of cash receipts, for which insufficient documentation is available for the tax authority to trace in the event of a tax audit. Thus, taxpayers appeared to have more options and were more likely to transform their fairness perceptions into (non)compliance behaviour. In the 'overstating business expenses' scenario, taxpayers were positioned in a more difficult situation where they were asked whether they would claim the private expenses as business expenses for tax deduction purposes. This situation may, to a certain extent, put these taxpayers in a much riskier position if they wanted to avoid or evade paying tax, compared to the other scenario, if they were selected for tax audit. In other words, in this situation, taxpayers were more compelled to

comply. Thus, their perceptions of fairness might not be such an important factor in this situation.

Likewise, the different amount of monetary values used in the scenarios might also contribute to different views on fairness. In the 'overstating business expenses' scenario, a smaller value of $2,500 was used compared to $10,500 in the 'understating incomes expenses' scenario. Such an effect was apparent in Malaysia, where taxpayers in the latter scenario (with the larger amount), reported a positive association between an instrumental attitude and compliance behaviour. In contrast to the 'overstating business expenses' scenario, where a relatively smaller amount of money was used, this scenario appeared not to be sufficiently appealing to taxpayers in their compliance decision-making. The different results documented in the two scenarios provide support to Jones' (1991) proposition that human beings respond differentially to issues depending on the magnitude of consequences of the issues in questions.

Another potential explanation is that the 'understating other incomes' scenario might be more relevant to more respondents (especially in Malaysia), than the 'overstating business expenses' scenario, therefore making it easier for them to report their opinions (and to relate to the

scenario).[116] Additionally, taxpayers were found to have more control over 'avoiding' compliance in the 'understating other incomes' scenario than the 'overstating business expenses' scenario, as indicated in the descriptive analysis. Possibly, this also relates to the lack of documentation in the 'understating other incomes' scenario, compared to the 'overstating business expenses' scenario. This situation therefore provides more opportunity for the taxpayers in both countries to avoid compliance as documented in the structural model results.

In short, given the two different scenarios in hand, undoubtedly taxpayers in both countries had different opinions regarding their compliance behaviour. In the 'overstating business expenses' scenario, where taxpayers were more 'obliged' to comply, this reveals that fairness perceptions, instrumental attitude and perceived behavioural control were not significant in taxpayers decisions whether to comply or not to comply. On the contrary, in the 'understating other incomes' scenario, all factors were important except for instrumental attitude in the New Zealand environment.

The interviews conducted in both New Zealand and Malaysia further explained the potential factors contributing to (non)compliance behaviour.

[116] On the negative side, such familiarity with the scenario may also encourage taxpayers to conceal their true intention whether or not to comply, to avoid their actual non-compliance behaviour being

Among the factors highlighted were taxpayers' attitude, their perceived behavioural control and fairness perceptions. The results imply that taxpayers' attitude largely influenced their tax (non)compliance decision-making. Perceived behavioural control over non-complying was associated with both taxpayers' good knowledge of tax and accessibility to tax consultants. In fact, some taxpayers argued that easy access to tax consultants among wealthy people helped them to successfully avoid or evade paying tax. While taxpayers were expecting a fair income tax system, negative perceptions on the fairness of the income tax system led them to not comply with the income tax system. They claimed that acts of non-compliance were performed to restore the fairness of the income tax system.

In addition, tax knowledge was also considered to be an important determinant of taxpayers' (non)compliance behaviour in both countries. Interestingly, while limited tax knowledge was considered to be a potential factor related to unintentional non-compliance behaviour, possessing good knowledge could not guarantee compliant behaviour. In fact, taxpayers in both countries agreed that having good tax knowledge might also motivate taxpayers to not comply. This might trigger the question of what is an appropriate level of tax knowledge to ensure total compliance. However,

detected. This may consequently lead to misleading results.

this question is not addressed in this study and therefore should be explored in future research.

Another determinant of (non)compliance behaviour is complexity of the tax system. This was an issue in New Zealand (but not in Malaysia) where the high level of complexity compelled taxpayers to not comply with their tax obligations either intentionally or unintentionally. The findings provide a signal to the New Zealand tax authority and to the government to increase their efforts in reducing the complexity of the tax system to improve taxpayers' compliance.

9.3.3 The Impact of Tax Knowledge and Tax Complexity on Fairness Perceptions

To gain a better understanding of fairness perceptions in both countries, the structural model incorporates tax knowledge and tax complexity in order to investigate how these variables affect fairness perceptions. These relationships were tested in Hypotheses 10 and 11, respectively. The results indicate that these factors explained 28.3 and 35.4 percent of the fairness perceptions in New Zealand and Malaysia, respectively, in the 'overstating business expenses' scenario. The predictive power was even greater in the 'understating incomes scenario' with 33.6 and 36.9 percent in New Zealand and Malaysia, respectively. Irrespective of the scenarios tested, the results reveal that both variables had significant positive path

coefficients with fairness perceptions in New Zealand and Malaysia. Specifically, the findings suggest that an increase in tax knowledge would significantly improve fairness perceptions. While the findings provide support to most of the prior studies (Christensen et al., 2000; Eriksen & Fallan, 1996; Fallan, 1999; Harris, 1989; Maroney et al., 2002; Schisler, 1995), they are inconsistent with Loo et al. (2008), and Tan and Chin-Fatt (2000) (involving the Malaysian and New Zealand environments, respectively).

With regard to the impact of tax complexity on fairness perceptions, the significant positive coefficient between the variables suggests that a less complex tax system would significantly improve fairness perceptions. The findings indicate that taxpayers in both countries preferred a less complex tax system which were then translated into their fairness perceptions. The findings provide support to Carnes and Cuccia (1996), Carroll (1987), Cialdini (1989), Kirchler et al. (2006), and Milliron (1985).

The survey findings on the impact of tax knowledge on fairness perceptions were further explained by the interview results in both New Zealand and Malaysia. Taxpayers in both countries agreed that lack of knowledge contributed to negative perceptions on the income tax system, thus, suggesting to tax authorities the need to provide more information to taxpayers, which consequently would improve their fairness perceptions.

Similarly, the complexity of the income tax system in New Zealand was also perceived as a contributing factor to negative perceptions on the fairness of the income tax system. This explains the findings obtained from the New Zealand survey results. Similar views were not expressed for Malaysia, notwithstanding taxpayers' perceptions that a less complex tax system would improve fairness perceptions (as indicated in the survey). This is probably due to the fact that the Malaysian income tax system was perceived as relatively uncomplex.

9.3.4 The Impact of Tax Knowledge and Tax Complexity on Perceived Behavioural Control

While perceived behavioural control is normally associated with skills, opportunities, barriers and obstacles, this study speculates that tax knowledge and tax complexity might influence taxpayers' perceived behavioural control. However, the results of this study did not reveal any statistical significance effect in New Zealand, thus suggesting rejection of Hypotheses 12 and 13, respectively. Notwithstanding, the findings could contribute to the existing knowledge of compliance behaviour, especially in the New Zealand context. To the researcher's knowledge, there is no empirical study addressing the impact of tax knowledge and tax complexity on taxpayers' perceived behavioural control. On the contrary, the effect of tax knowledge on perceived behavioural control over non-compliance was evidenced in Malaysia.

The results also suggest that an increase in tax knowledge among Malaysian taxpayers would improve their perceived behavioural control over non-complying with tax law. Although tax complexity was also found to be significant in the 'overstating business expenses' scenario, the coefficient was very low and at a significance level of 0.1 is considered minimal. In fact, the analysis in the 'understating other incomes' scenario suggests that the factor was not significant. The findings suggest acceptance of Hypothesis 12 but not Hypothesis 13.

The differing results between the two countries gives rise to speculation that the effect of tax knowledge on the perceived behavioural control over non-compliance may vary across countries. The possible explanations would be the different taxpayer compliance models and penalty mechanisms adopted in the countries. In the case of New Zealand, the tax authority appeared to have a more systematic approach of detecting non-compliance and subsequently improving compliance through Inland Revenue's Compliance Model (New Zealand Inland Revenue, 2007), than is the case for Malaysia. Similarly, the penalty regime in New Zealand is more stringent compared to that in Malaysia. Having said that, New Zealand taxpayers might perceive themselves to be knowledgeable but still have less control over non-compliance with their tax obligations, as was demonstrated in the survey results.

While the interview results did not specifically inquire into the effect of tax knowledge and tax complexity on perceived behavioural control over non-complying, taxpayers in both countries indirectly indicated that possessing good knowledge and the availability of tax consultants assisted some of them to successfully avoid or evade paying tax. On the other hand, none of the interviewees mentioned the possibility that tax complexity may affect taxpayers' perceived behavioural control.

9.3.5 The Impact of Fairness Perceptions on Attitude towards Compliance

The analysis of the structural model on the impact of fairness perceptions on attitude towards compliance (as tested in Hypotheses 14a and 14b) generally indicates that fairness perceptions could not clearly explain how taxpayers formed their attitude towards compliance. This is drawn from the R^2 values, which were extremely low in both countries at less than 10 percent. While the results undoubtedly suggest that taxpayers' attitude towards compliance may be influenced by other factors not included in this study,[117] it is important to note the path coefficients between the investigated variables provide some preliminary evidence for undertaking future research.

[117] The possible factors are trust, pride, culture, education and personal identity (Hasseldine & Bebbington, 1991; Torgler & Schneider, 2004; 2005).

The findings indicate no significant effect between fairness perceptions and affective attitude in New Zealand. On the contrary, such an effect was visible in Malaysia. The positive path coefficient suggests that Malaysian taxpayers' fairness perceptions had significantly improved their affective attitude towards compliance. This finding provides support to Devos (2009) and Roberts (1994). The effect of fairness perceptions on affective attitude seemed to be consistent in both scenarios tested. However, such consistency was not demonstrated in the case of instrumental attitude. For instance, while New Zealand taxpayers appeared to demonstrate a significant impact from their fairness perceptions on the instrumental attitude in the 'overstating business expenses' scenario, a similar result was not exhibited in the 'understating other incomes' scenario. The significant effect in the first scenario suggests that an improvement in taxpayers' fairness perceptions would lower their instrumental attitude towards compliance. One possible explanation for this association was that taxpayers viewed the income tax system to be fairer as a consequence of their negative attitude towards compliance, rather than the reverse effect.

In Malaysia, the significant effect of fairness perceptions on the instrumental attitude was documented in the 'understating other incomes' scenario only. The positive path coefficient suggests that better perceptions of the fairness of the income tax system would improve taxpayers' instrumental attitude towards compliance. Clearly, the analysis of the

effect of fairness perceptions on attitude towards compliance revealed different results across the two countries. Such differing results suggest that taxpayers' fairness perceptions might influence their attitude towards compliance but at a different level. Possibly, other potential factors affecting attitude towards compliance (particularly with regard to locality attributes of the taxpayers), together with fairness perceptions, need to be investigated. In the interviews, none of the participants explicitly commented on the possibility that fairness perceptions might affect (or not affect) their attitude towards compliance. Instead, they were more concerned that fairness perceptions would influence their (non)compliant behaviour. Since attitude towards compliance was closely associated with (non)compliant behaviour, it was not possible to implicitly conclude that fairness perceptions did not influence taxpayers' attitudes.

9.4 Implications of the Study

In the researcher's view, the results of this study have made contributions to the tax literature as well as to tax authorities in New Zealand and Malaysia. The contributions are discussed in this section.

9.4.1 To the Literature

This study contributes to the existing literature in several ways. First, this cross-cultural study of New Zealand and Malaysia adds to the limited literature available in these countries. Most of the prior studies have been

undertaken in other parts of the world, such as the United States (US), Europe and Australia. As indicated earlier, there were only two major studies on fairness perceptions undertaken in the New Zealand environment, that is by Hasseldine et al. (1994) and Tan (1998). These studies which focused on limited dimensions of fairness suggest that taxpayers had negative perceptions on the fairness of the tax burden, fairness of the tax rate structure (Tan, 1998) and fairness of the overall income tax system (Hasseldine et al., 1994). The only dimension which was moderately perceived as fair was personal fairness (Tan, 1994).

While their findings may still be relevant, the findings from the present study which extends the dimensions of fairness would provide an important update to the available literature. In particular, the findings of this study which suggest that taxpayers appeared to have positive perceptions on horizontal fairness, vertical fairness, retributive fairness and personal fairness may at least provide an indication that taxpayers' perceptions may have improved over time.[118] In addition, the study also provides information on the negative perceptions that taxpayers had on general fairness, exchange fairness and administrative fairness of the current income tax system.

Similarly, the findings on a positive relationship between the fairness perceptions and compliance behaviour, particularly in the case of 'understating other income' scenario indicate the importance of fairness perceptions in compliance behaviour. Although the results appear to be contradicting with the findings offered in Hasseldine et al.'s (1994) study, they are consistent with Efebera et al. (2004), Roth et al. (1989) and Turman (1995).

In Malaysia, the findings indicating that taxpayers have favourable fairness perceptions do not only provide support to the existing evidence in Azmi and Perumal's study (2008), but also extends the dimensions of fairness reported to date. In that study, the authors replicated Gerbing's (1988) work to explore individual taxpayers' perceptions on the fairness of the income tax system. While that exploratory study provides preliminary findings in Malaysian environment, this study through the confirmatory analysis (using PLS) suggests that taxpayers' fairness perceptions may go beyond general fairness, fairness of the tax rate structure and self-interest. Further, the findings on the effect of fairness perceptions on taxpayers' compliance behaviour provide additional information to the tax literature in Malaysia. It is anticipated that the findings documented in this study will be a 'stepping stone' for more studies in the future.

[118] However, it is important to note that the difference in findings may be due to other factors such as sample selection, measures of fairness and the implementation of the income tax system at that time

Second, the findings suggest that taxpayers' decisions in compliance behaviour are generally common across the two countries under study. Although New Zealand is referred to as a developed economy, and Malaysia is an example of a developing economy, in terms of tax compliance behaviour, taxpayers in the two countries are indifferent with respect to their tax compliance behavioural perceptions. Interestingly, their cultural differences which may affect their societal norms and personal norms also appear to be making no difference in taxpayers' compliance behaviour.

Third, the mixed-method approach undertaken in this study provides complementary views from different perspectives. While the survey results emphasise the predictive power and significance level of the analysis, the interviews enhance the findings by providing more detailed explanations. For instance, while the survey results suggest that a relationship between fairness perceptions and compliance behaviour exists, the interview participants further explain their concerns with the income tax systems that reflect their negative perceptions of fairness. This approach is consistent with gradual development of taxation studies incorporating both quantitative and qualitative orientations (e.g. Loo, 2006; McKerchar, 2003).

(which is prior to the self assessment system).

Fourth, the fact that this study applies a confirmatory technique (through the use of PLS) provides a new dimension to the existing literature. This approach differs from most of studies on fairness perceptions undertaken so far (Azmi & Perumal, 2008; Gerbing, 1988; Gilligan & Richardson, 2005; Hasseldine et al., 1994; Richardson, 2005b; Tan, 1998) which were exploratory in nature. The use of confirmatory analysis is deemed appropriate at this stage given that the preliminary evidence of fairness perceptions already exist in addition to the availability of the established theories.

Fifth, this study has developed a new set of measures of fairness perceptions, providing an alternative to the one offered by Gerbing (1988). This new instrument perhaps would be useful for future researchers intending to undertake the studies of fairness in other countries. Also, the new measures for tax knowledge, tax complexity and compliance behaviour may be useful for future studies. These measures which are all represented by more than one items and specifically tested in the context of tax compliance behaviour, are believed to be more reliable and valid.

Finally, the integration of Equity Theory, the Theory of Planned Behaviour (TPB), and the two external variables (tax knowledge and tax complexity), not only prove that TPB appears to be useful in explaining tax compliance behaviour but also extend the well-established TPB. In fact, the structural

model has been more successful in explaining the phenomenon, compared to previous studies (which adopted the Theory of Reasoned Action (TRA) or the TPB) (Bobek, 1997; Trivedi et al., 2005). This newly developed can be replicated and tested to other parts of the world so as to be able to generalise the findings in this study as well as to allow a more comprehensive comparison among the countries in the future.

9.4.2 To Tax Authorities

In addition to advancing academic and knowledge in the taxation area, this study also has its practical implications. First, the information pertaining to various dimensions of fairness will be useful to the tax authorities to improve the areas which have led to negative attitudes on the tax system among taxpayers. For instance, being aware that taxpayers in both countries were dissatisfied with government spending and disclosure issues would assist the tax authorities in encouraging the governments improve the efficiency of government expenditure and the level of transparency. Perhaps public advertisement on how the tax money was spent could be a helpful mechanism. Additionally, the information that fairness perceptions are positively associated with compliance behaviour, particularly in the 'understating income scenario' may assist the tax authorities to develop appropriate strategies to improve compliance. For instance, they may consider applying withholding tax on various types of additional incomes.

Second, the information obtained in this study on taxpayers' knowledge of tax, (which is generally quite limited, especially in Malaysia), would also be useful for tax authorities to develop an appropriate education programme. A more consistent, rather than seasonal campaign through the public media, could be an effective way to communicate tax matters to the general public. Incorporating tax education in the secondary schools curriculum may also help for early exposure to tax.

Third, the information on taxpayers' perceived complexity of the income tax system provides a signal to the tax authorities, especially in New Zealand, to increase their efforts in providing a more user-friendly income tax system. While the income tax system has undoubtedly gone through a simplification programme, the benefits of such a programme are still vague in the view of taxpayers. Perhaps more assistance should be offered to taxpayers, especially the self-employed, to deal with their tax obligations at the early stages of their business activities.[119]

Fourth, this study provides evidence that taxpayers' compliance behaviour, irrespective of the income tax system and environment, generally depends on their attitude towards compliance, subjective norms, fairness

[119] The Inland Revenue Department (IRD) has a special unit to help new businesses by providing free tax education and advice relating to tax matters (New Zealand Inland Revenue, 2010a). However, the numbers of self-employed who are aware of the services offered and consequently seek the IRD's assistance is not known. Notwithstanding the availability of such assistance, probably, greater issue with the self-employed is the ongoing compliance costs.

perceptions and perceived behavioural control. Thus tax authorities should be focusing on these aspects if they wish to increase taxpayers' compliance. Although it may be possible for the tax authorities to encourage a more positive attitude towards compliance and subjective norms among taxpayers, this may be difficult and require persistence. Also, it is unlikely that everyone would ever have a positive attitude towards compliance. This is because attitudes towards compliance and subjective norms are normally associated with taxpayers' personal identity, inner values and the associated environments (such as friends, work place and economic background), areas where the tax authorities might have less control.

A relatively easier way to improve compliance is to focus on the fairness perceptions and perceived behavioural control. These two factors are generally within the control of tax authorities. For instance, fairness perceptions could be improved by addressing the issues of concern highlighted in this study. Furthermore, this study also highlighted that fairness perceptions could be influenced by tax knowledge and tax complexity. Hence, tax authorities should concentrate on educating taxpayers on their responsibility to pay tax and the way tax revenues are spent while at the same time offering a more user-friendly income tax system. If they follow this approach, it would be more likely that taxpayers will comply with their tax obligations.

With regard to taxpayers' perceived behavioural control, this study suggests that having adequate control over the decision to comply or not would result in low compliance. Taxpayers' perceived behavioural control over non-complying, in turn, depends on good tax knowledge and a less complex tax system. This information is important in cautioning tax authorities that taxpayers possessing good knowledge in a simple tax system may be motivated to avoid or evade paying tax. This does not mean that the tax authorities should limit disseminating knowledge to taxpayers and maintain a complex tax system. Rather, in this instance, the tax authorities should actively undertake tax audit activities to detect these intentional non-compliant taxpayers.

9.5 Summary

This chapter discusses the results obtained from both the surveys and interviews. The discussion is predominantly drawn from Chapters 5 to 8. From the discussion, it appears that, notwithstanding the differences between the countries, generally taxpayers in New Zealand and Malaysia agreed on the factors contributing to their compliance behaviour. Interestingly, the role of fairness perceptions in compliance behaviour was evidenced in both countries, confirming Equity Theory and prior studies. This chapter concluded with a discussion of the implications of the study where both practical and more academic and theoretical contributions were

discussed. In the next chapter, the overall conclusions, limitations of the study and future directions for research will be discussed.

Chapter 10

Conclusions, Limitations and Future Directions for Research

10.1 Conclusions

A few cross-cultural studies on tax compliance have been undertaken to date to understand the motivating factors behind taxpayers' (non)compliance behaviour. Examples of the studies are Bobek et al. (2007), Cummings et al. (2001), and Richardson (2005b; 2006). However, none of these studies consider either the New Zealand or Malaysian income tax systems; rather they focus more on the United States (US) and Australia. Thus, the researcher believes that it is timely to undertake this cross-cultural study between New Zealand and Malaysia to serve as a preliminary step towards investigating further taxpayers' motivations to comply with their respective income tax systems.

Furthermore, comparing Malaysia with New Zealand, which has been recognised as the second most compliant nation by the Organisation for Economic Cooperation and Development (OECD) (Belkaoui, 2004), is essential to provide empirical evidence of similarities or differences in taxpayers' compliance behaviours between the two jurisdictions.[120] Also, this study answers the call made by Richardson and Sawyer (2001) for greater cross-cultural research on taxpayers' compliance behaviour. While

the differences between New Zealand and Malaysia in terms of cultures, economies and ethnicities are obvious, do they matter with regard to taxpayers' compliance decision-making?

To understand this issue of compliance behaviour, this study narrows its scope to the role of fairness perceptions. Fairness perceptions, which are derived from Equity Theory, have been established as an important element in individuals' lives (Zhiyong & Qingyang, 2007), including in making their political evaluations (Lind & Tyler, 1988; Rasinski & Tyler, 1988). In taxation, a number of studies have been undertaken on the relationship between fairness perceptions and compliance behaviour, which provide inconclusive results.

In New Zealand and Malaysia, limited studies are available, thus requiring more research in this area. In New Zealand, a study by Hasseldine et al. (1994) on overall fairness perceptions among individual taxpayers reveals that they perceived the income tax system at that time to be unfair. However, such negative perceptions do not correlate with their noncompliance behaviour. Another study by Tan (1998), on the other hand, indicates an improvement in taxpayers' fairness perceptions. While these two major studies provide important empirical evidence in the

[120] In that study, Malaysia was ranked eighth after the US.

literature, they were both conducted prior to the formal implementation of the current self assessment system in New Zealand.

To date, there have been two major studies on fairness perceptions undertaken in Malaysia (Azmi & Perumal, 2008; Mustafa, 1996). Mustafa (1996) only focused on the limited dimensions of tax fairness but does not comment on the determinants of such judgments. Azmi and Perumal (2008) attempted to identify the fairness dimensions among Malaysian taxpayers by replicating Gerbing's (1988) questionnaire. In her study, Gerbing (1988) performs a factor analysis on the 21 self-developed measures of fairness perceptions to finally come up with four underlying dimensions of fairness.

Having reviewed prior overseas studies, and those in New Zealand as well as Malaysia, the researcher has identified a research gap that needs to be investigated, which includes the current state of fairness perceptions, the role of fairness perceptions in taxpayers' compliance behaviour, and the factors contributing to fairness perceptions. Realising that fairness perceptions are only one possible factor in taxpayers' compliance behaviour, there is a need to examine other relevant factors motivating taxpayers' compliance behaviour. A dominant theory in behavioural decision-making, namely the Theory of Planned Behaviour (TPB), was

adopted and integrated with Equity Theory, and consequently a new compliance model is developed in this study.

This identified research gap leads to the formation of five objectives in this study. The first objective is to observe taxpayers' (both in New Zealand and Malaysia) levels of fairness perceptions, tax knowledge, perceived complexity of the income tax systems and their compliance behaviour. To answer this objective, taxpayers' responses in the survey questionnaires were analysed using descriptive analysis through SPSS. The results suggest that New Zealand taxpayers viewed the income tax system as reasonably fair in terms of horizontal fairness, personal fairness and retributive fairness, but not administrative fairness, exchange fairness and general fairness. In Malaysia, positive perceptions of various fairness perceptions were demonstrated but at different levels. Accordingly, a *t*-test analysis was conducted and it appears that Malaysian taxpayers have significantly better fairness perceptions on their current income tax system compared to New Zealand taxpayers.

In relation to tax knowledge, while both New Zealanders and Malaysians viewed themselves as having good knowledge of their respective income tax systems, in relative terms New Zealand taxpayers are 'better off'. In terms of their perceived complexity of the income tax system, New Zealand taxpayers viewed their income tax system as more complex

relative to Malaysian taxpayers. In terms of compliance behaviour, New Zealand taxpayers generally had better levels of compliance than their Malaysian counterparts. These results were generally supported by the interviews conducted among the taxpayers in both countries. This information relating to taxpayers' fairness perceptions, tax knowledge, perceived complexity of the income tax systems and compliance behaviour, is essential for tax authorities. For instance, the information that taxpayers have negative perceptions on the administrative aspects of the income tax system may encourage the New Zealand Inland Revenue to improve the services they provide to taxpayers. Similarly, the negative perceptions of general fairness may provide the necessary information for the tax authority to lobby the government to spend tax revenue more efficiently and to provide more information to taxpayers on government expenditures.

The second objective addressed in this study is to confirm the multi-dimensional perceptions of fairness. In order to achieve this, a confirmatory factor analysis was conducted using PLS software. The results from the analysis indicate that both New Zealand and Malaysian taxpayers have multi-dimensional perceptions of the fairness of their respective income tax systems. A similar indication was provided in the interviews from the discussion on various aspects of fairness perceptions. The findings from both approaches provide support, not only to the

premises under Equity Theory, but also to the existing literature on fairness perceptions, particularly in New Zealand and Malaysia.

The third objective of this study is to understand the role of fairness perceptions, together with the TPB elements in taxpayers' compliance behaviour. To investigate this relationship, the results from Partial Least Squares (PLS) analysis was analysed in two different scenarios, that is, 'overstating business expenses' and 'understating other incomes'. The model, which was found to have good predictive power in both countries, shows that the researcher's attempt to integrate Equity Theory and the TPB to explain taxpayers' compliance behaviour has been successful. The results suggest that affective attitude and subjective norms are the most important factors contributing to taxpayers' compliance behaviour across the two countries.

Interestingly, fairness perceptions and perceived behavioural control appear to be important only in the 'understating other incomes' scenario in both New Zealand and Malaysia. These findings suggest that, in relation to fairness perceptions and perceived behavioural control, taxpayers' compliance behaviour varies depending on the situations taxpayers encounter. In this instance, it appears that fairness perceptions and perceived behavioural control will play a role in (non)compliant decision-making depending on the amount at stake and the level of difficulty of

(non)complying.[121] Accordingly, the positive perceptions of fairness will only motivate taxpayers to comply if the amount at stake is large. In relation to perceived behavioural control, taxpayers' high control over the tax situation will motivate them to avoid being compliant. Consistent results (except for subjective norms) were demonstrated through the interview results, where attitude, fairness perceptions and perceived behavioural control were considered important in taxpayers' compliance decision-making.

While taxpayers' attitude and subjective norms are generally difficult for tax authorities to control, their focus should be on improving taxpayers' fairness perceptions in an effort to encourage voluntary compliance. In relation to the negative association between perceived behavioural control and compliance behaviour in the 'understating other incomes' scenario, this information should be useful for tax authorities when refining their tax audit activities.

While understanding the role of fairness perceptions is important, this study also addressed the factors contributing to those perceptions, namely

[121] An amount of NZ$2,500 (MYR2,500 in Malaysia) was used in the 'overstating business expenses' scenario, whereas NZ$10,500 (MYR10,500 in Malaysia) was used in the 'understating other incomes' scenario. In the 'overstating business expenses' scenario, receipts of the business expenses would be required to provide evidence that NZ$2,500 (MYR2,500) was for business purposes. Whereas in the 'understating other incomes' scenario, as it merely considered cash jobs between friends that required no receipts, little evidence is available in the event of tax audit. In these two scenarios, the amounts used are in their respective currencies with no exchange rate equivalents.

tax knowledge and tax complexity. The results indicate that having more knowledge of the income tax system and a less complex tax system improves taxpayers' fairness perceptions in both New Zealand and Malaysia. Similar indications were provided in the interviews, especially in New Zealand. This empirical evidence suggests that tax authorities should focus on increasing taxpayers' knowledge and simplifying the income tax system in order to improve fairness perceptions among taxpayers, and consequently encourage taxpayers to comply voluntarily.

In addition to the effect of fairness perceptions, the Malaysian results also indicate that tax knowledge has an influence on taxpayers' perceived behavioural control in avoiding compliance. The Malaysian results, however, differ from their New Zealand counterparts. Notwithstanding better knowledge demonstrated amongst the New Zealand taxpayers, compared to the Malaysian taxpayers, the New Zealand taxpayers did not believe that their good knowledge would enable them to avoid or evade paying tax. This perhaps indicates that the New Zealand Inland Revenue has a more systematic approach of detecting non-compliance and its penalty regime in New Zealand is more stringent compared to that in Malaysia. Alternatively, it is probably due to a very complex tax system in place and that a greater knowledge was required to enable them to avoid or evade tax.

To answer the fifth objective, this study also establishes that fairness perceptions influence taxpayers' attitudes in both New Zealand and Malaysia to a certain degree. In other words, the results suggest that taxpayers' positive perceptions of the fairness of the income tax system will help shape their positive attitudes towards compliance.

In sum, combining Equity Theory and the TPB, and applying a mixed-method approach in investigating the role of fairness perceptions and other relevant variables in taxpayers' compliance behaviour in New Zealand and Malaysia, has been rewarding. Significant contributions, both theoretical and practical, have been made. Interestingly, these results are largely universal across the two countries, notwithstanding the differences in respect of their cultures, economics and ethnicities.

10.2 Limitations of the Research

Notwithstanding the significant contributions of this study, it also has a number of limitations. The first is the inherent weaknesses with the survey approach itself, such as non-response bias, respondents' representativeness, and the respondents' differing interpretation of the questions. With respect to non-response bias and respondents' representativeness, the researcher has taken reasonable measures to reduce the problem. Furthermore, the *t*-test analysis verifies that there is no problem of response bias in both New Zealand and Malaysia. Similarly, the *t*-test analysis also indicates that

responses in both countries are representative of their total populations to a reasonable degree. It is, however, acknowledged that these weaknesses may remain to some extent. For example, while the analysis provides an indication of non-response bias in New Zealand sample, it can still be a problem considering the low response rate achieved. The low response rate may also affect the representativeness of the New Zealand population. In Malaysia, the use of salaried and wage earners as the sample in the study also limit its representativeness to that group of taxpayers, not to the broader population of individual taxpayers. In terms of the different interpretation of the questions by respondents, the researcher has made reasonable efforts to ensure the wording and sentences were straightforward and precise. Furthermore, pre-testing of the survey was also conducted prior to distribution of the final questionnaire to the sample populations.

Second, the use of a self-report survey using hypothetical scenarios might also create bias. However, this approach is considered appropriate to capture taxpayers' (non)compliance behaviour as the act of (non)complying is considered to be a sensitive issue. In this instance, asking taxpayers for their actual compliance behaviour may not be suitable as potential respondents may be hesitant to provide such information. Furthermore, this is a common approach adopted in prior studies (for example, Bobek, 1997; Trivedi et al., 2005).

Third, the survey response rate of 10 percent in New Zealand is considered low by comparison to previous studies. However, with an absolute number of 229 responses, the number is sufficient to provide the basis for thorough statistical analysis.

Fourth, the convergent validity analysis on the constructs indicates lower item loadings than the recommended threshold of 0.7 for some of the items. Notwithstanding the low loadings, the items are still considered acceptable for further analysis (Chin, 1998b).

In terms of the interview approach, the main weakness is probably the use of similar samples for the survey. In this study, participants for the interviews were invited to participate via the survey. Thus, it is more likely that the sixty participants (comprising thirty interviewees each, in New Zealand and Malaysia) have also expressed their opinions in the survey. While it may be preferable to have the interview participants drawn from other groups of taxpayers, the use of similar samples enables further explanations of the survey results and consequently enriches the findings.

Another limitation is that this study only uses individual taxpayers. Thus, caution should be taken when generalising to other groups of taxpayers. Also, there are slight differences in the characteristics of individual taxpayers in New Zealand and Malaysia. In New Zealand, the respondents

are a mix of self-employed taxpayers, salary and wage earners and those who earned investment income. In Malaysia, the respondents comprised salary and wage taxpayers only. Notwithstanding these differences, the respondents are all taxpayers in their respective countries and therefore their perceptions on their income tax systems are important.

10.3 Future Directions for Research

The compliance model developed in this study has been shown to offer a good explanation of taxpayers' compliance behaviour in both New Zealand and Malaysia. Thus replication of this model to other parts of the world is important so as to be able to generalise the findings in this study. Furthermore, this would allow a more comprehensive comparison among countries in the future.

In addition, future research should continue to extend the compliance model, possibly by decomposing the TPB variables (such as subjective norms and perceived behavioural control) to gain a better insight into the determining factors. Another way of extending the model is by including other potential variables such as penalty regimes. As taxation lies in a legislative environment, penalty regimes might be an important contributing factor to taxpayers' (non)compliance behaviour. In this respect, penalty regimes might have either a direct influence on taxpayers'

compliance behaviour, or an indirect influence through taxpayers' perceived behavioural control, or both.

As indicated earlier, this study is limited to individual taxpayers of two different types (the more diverse groups of taxpayers in New Zealand and salaried and wage earners in Malaysia). It would be interesting if future research could select the samples of taxpayers of the same like for comparison purpose. Extending this study to other groups of taxpayers and to tax professionals would also be interesting. While other groups of taxpayers may generally share similar views with individual taxpayers, tax professionals' perceptions are unknown.[122] In addition, the focus on actual non-compliant taxpayers, if possible, would provide a further picture of the role of fairness perceptions in taxpayers' non-compliance behaviour. Such an extension to this study could be undertaken with the assistance of the tax authority.

10.4 Concluding Remarks

Taxpayers' compliance behaviour has been a major focus for both tax authorities and researchers around the world. While it is essential to maintain high levels of compliance among taxpayers, the contributing

[122] This is based on differing opinions of the complexity of the income tax system where taxpayers prefer a simple tax system (for example, Kirchler et al., 2006; McKerchar, 2005; Richardson, 2006a) while tax professionals may prefer a complex one (Sawyer, 1996b; White, 1990). In other words, taxpayers' opinions cannot be simply generalised to tax professionals due to their different positions and self-interest.

factors to encouraging such high levels of compliance are not well understood, although fairness perceptions could be one such factor, as highlighted in this study. Thus, it is hoped that the findings in this study will be useful for tax authorities and governments to improve their income tax systems and consequently motivate taxpayers to be more compliant.

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Appendices

Appendix 1

Letter of Approval from the University of Canterbury's Human Ethics Committee

Ref: HEC 2008/89

22 August 2008

Natrah Saad
Department Accountancy, Finance & Information Systems
UNIVERSITY OF CANTERBURY

Dear Natrah

The Human Ethics Committee advises that your research proposal "Fairness perceptions and compliance behaviour: taxpayers' judgments in self-assessment environments." has been considered and approved.

Please note that this approval is subject to the incorporation of the amendments you have provided in your email of 7 August 2008.

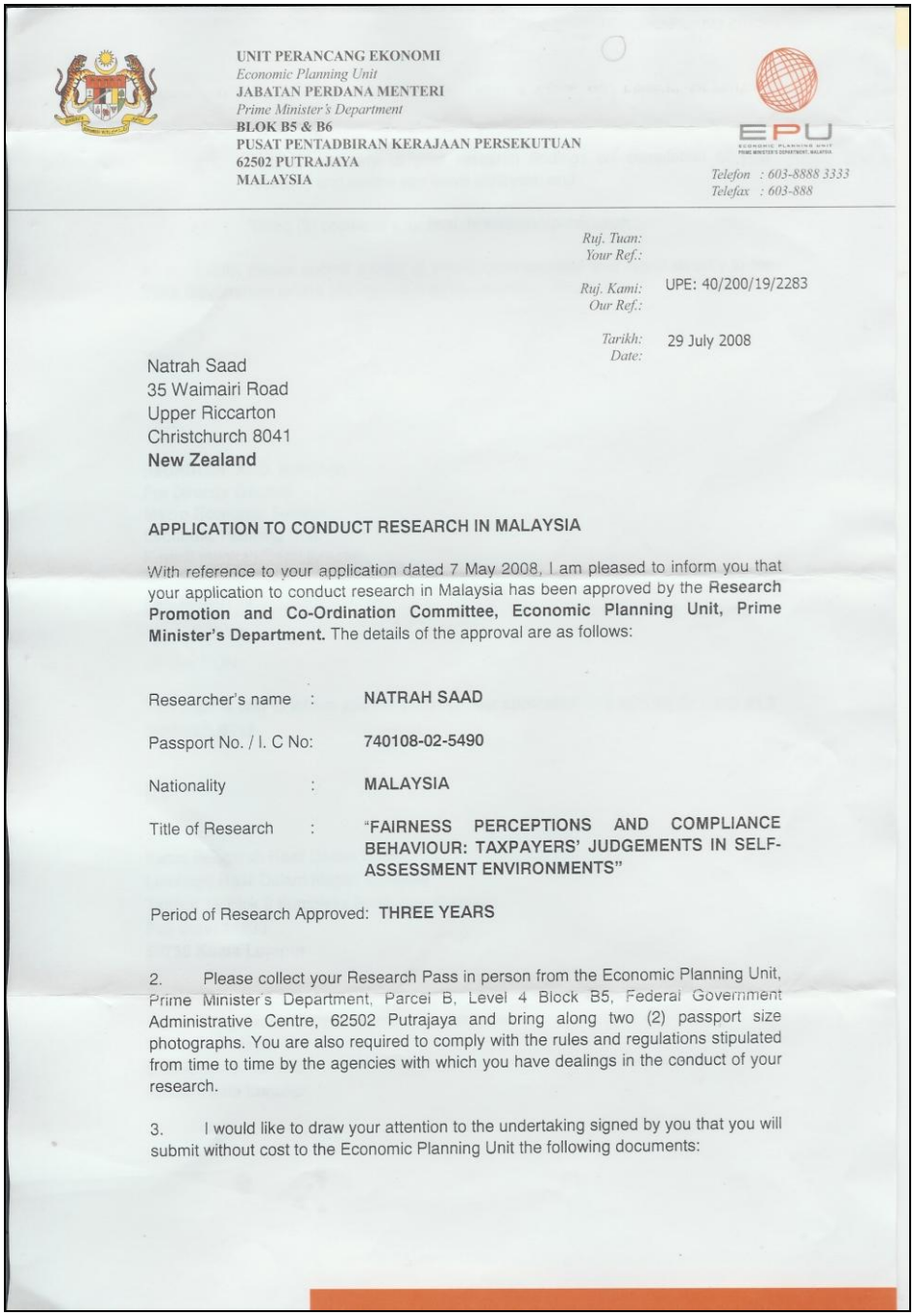
Best wishes for your project.

Yours sincerely

Dr Michael Grimshaw
Chair, Human Ethics Committee

Appendix 2

Letter of Approval from the Economic Planning Unit, Prime Minister's Department of Malaysia



UNIT PERANCANG EKONOMI
Economic Planning Unit
JABATAN PERDANA MENTERI
Prime Minister's Department
BLOK B5 & B6
PUSAT PENTADBIRAN KERAJAAN PERSEKUTUAN
62502 PUTRAJAYA
MALAYSIA

EPU

Telefon : 603-8888 3333
Telefax : 603-888

Ruj. Tuan: Your Ref.:

Ruj. Kami: Our Ref.: UPE: 40/200/19/2283

Tarikh: Date: 29 July 2008

Natrah Saad
35 Waimairi Road
Upper Riccarton
Christchurch 8041
New Zealand

APPLICATION TO CONDUCT RESEARCH IN MALAYSIA

With reference to your application dated 7 May 2008, I am pleased to inform you that your application to conduct research in Malaysia has been approved by the **Research Promotion and Co-Ordination Committee, Economic Planning Unit, Prime Minister's Department.** The details of the approval are as follows:

Researcher's name : **NATRAH SAAD**

Passport No. / I. C No: **740108-02-5490**

Nationality : **MALAYSIA**

Title of Research : **"FAIRNESS PERCEPTIONS AND COMPLIANCE BEHAVIOUR: TAXPAYERS' JUDGEMENTS IN SELF-ASSESSMENT ENVIRONMENTS"**

Period of Research Approved: **THREE YEARS**

2. Please collect your Research Pass in person from the Economic Planning Unit, Prime Minister's Department, Parcel B, Level 4 Block B5, Federal Government Administrative Centre, 62502 Putrajaya and bring along two (2) passport size photographs. You are also required to comply with the rules and regulations stipulated from time to time by the agencies with which you have dealings in the conduct of your research.

3. I would like to draw your attention to the undertaking signed by you that you will submit without cost to the Economic Planning Unit the following documents:

a) A brief summary of your research findings on completion of your research and before you leave Malaysia; and

b) Three (3) copies of your final dissertation/publication.

4. Lastly, please submit a copy of your preliminary and final report directly to the State Government where you carried out your research. Thank you.

Yours sincerely,

(**MUNIRAH ABD. MANAN**)
For Director General,
Macro Economic Section,
Economic Planning Unit.
E-mail: munirah@epu.jpm.my
Tel: 88882809/2818
Fax: 88883798

ATTENTION

This letter is only to inform you the status of your application and **cannot be used as a research pass**.

C.c:

Ketua Pengarah Hasil Dalam Negeri
Lembaga Hasil Dalam Negeri Malaysia
Tingkat 15 Blok 9 Kompleks Bangunan Kerajaan
Peti Surat 11833
50758 Kuala Lumpur

Pengarah,
Institut Pengurusan Penyelidikan dan Perundingan
Universiti Malaya,
C 313, Bangunan IPS,
50603 Kuala Lumpur.

Appendix 3

A Sample of Survey Questionnaire - New Zealand Version

College of Business and Economics

TAXPAYER FAIRNESS PERCEPTIONS AND COMPLIANCE BEHAVIOUR SURVEY

Please return your completed questionnaire in the enclosed envelope to:

Natrah Saad
Department of Accountancy, Finance and Information Systems
University of Canterbury
Private Bag 4800
Christchurch 8140
New Zealand.

Dear Participant,

1. This questionnaire should take you no longer than 30 minutes to complete. It consists of statements that require you to respond accordingly, although there is no right or wrong answer.

2. In addition to completing the questionnaire, I would like to invite you to take part in an interview later in the year.

3. Please send your responses and consent form to take part in the interview (if agreed) in the self-addressed stamped envelope enclosed.

4. To maintain the anonymity of the responses in this questionnaire, a person other than the researcher and her supervisors will be requested to open the mail and separate the completed questionnaire from the consent form. Thus, your identity will not be associated with your response in this questionnaire.

5. Please send your responses and consent form to take part in the interview (if agreed) within four weeks time in the self-addressed stamped envelope enclosed.

Thank you. I look forward to receiving your responses.

Yours faithfully,

NATRAH SAAD
Phd Student
Email: nbs24@student.canterbury.ac.nz
Tel: (03) 364 2613 Ext. 7379

DR ADRIAN SAWYER
Professor of Taxation
Email: adrian.sawyer@canterbury.ac.nz
Tel: (03) 364 2617

SECTION A

Below are statements concerning your beliefs about the fairness of the income tax system in New Zealand. Please circle one answer in each line that best describes how you feel about the income tax system.

	Strongly Disagree ▼			Neutral ▼			Strongly Agree ▼
1. I believe the government utilizes a reasonable amount of tax revenue to achieve social goals, such as the provision of benefits for low income families.	1	2	3	4	5	6	7
2. I believe that I pay my fair share of the tax burden under the current income tax system.	1	2	3	4	5	6	7
3. I believe everyone pays their fair share of income tax under the current income tax system.	1	2	3	4	5	6	7
4. I receive fair value from the government in return for my income tax paid (e.g. benefits).	1	2	3	4	5	6	7
5. There are a number of ways available to me to correct errors in the calculation of my tax liability, if necessary, at no additional cost.	1	2	3	4	5	6	7
6. Compared to other taxpayers, I pay more than my fair share of income tax.	1	2	3	4	5	6	7
7. It is fair for individuals with similar amounts of income to pay a similar amount of income tax.	1	2	3	4	5	6	7
	Strongly Disagree ▼			Neutral ▼			Strongly Agree ▼
8. I think the government spends too much tax revenue on unnecessary welfare assistance.	1	2	3	4	5	6	7
9. It is fair that high-income earners are subject to tax at progressively higher tax rates than low-income earners.	1	2	3	4	5	6	7
10. I believe it is fair for me to pay a similar share of income tax compared with other taxpayers earning an equivalent amount of income.	1	2	3	4	5	6	7
11. It is fair that 'equals before tax are equals after tax'. For example, if a person earning $100,000 before tax pays $20,000 tax, everyone earning $100,000 income before tax should be left with $80,000 after tax.	1	2	3	4	5	6	7
12. It is fair that individuals who deliberately evade paying their taxes should be penalised with the same amount of penalty regardless of the amount of tax evaded.	1	2	3	4	5	6	7

	Strongly Disagree			Neutral			Strongly Agree
13. It is fair that low-income earners receive more benefits from the government compared to high-income earners.	1	2	3	4	5	6	7
14. It is fair that low income-earners are taxed at a lower rate than middle-income earners.	1	2	3	4	5	6	7
15. Middle-income earners pay their fair share of income tax.	1	2	3	4	5	6	7
16. The administration of the income tax system by the Inland Revenue Department is consistent across years and taxpayers.	1	2	3	4	5	6	7
17. The income taxes that I have to pay are high considering the benefits I receive from the government.	1	2	3	4	5	6	7
18. The share of the total income taxes paid by high-income earners is much too high.	1	2	3	4	5	6	7
19. To be fair, the degree of punishment for evading tax should depend on the degree of non-compliance.	1	2	3	4	5	6	7
20. I believe the initial late payment penalty on the unpaid tax, imposed on non-compliant taxpayers under the current tax system, is fair.	1	2	3	4	5	6	7

SECTION B

Below are statements concerning personal perceptions of tax knowledge and tax complexity of the income tax system. Please circle one answer in each line that best describes how you feel about the statements.

	Strongly Disagree			Neutral			Strongly Agree
1. The income tax system is a legitimate way for the government to collect revenue to manage an economy.	1	2	3	4	5	6	7
2. As far as I am aware, non-compliant taxpayers can be imprisoned, if found guilty of evading tax.	1	2	3	4	5	6	7
3. To my knowledge, individuals are subject to a single flat rate of income tax under the current tax system.	1	2	3	4	5	6	7
4. As far as I am aware, everyone who earns income sourced in this country is taxable, regardless of whether that person is resident or not.	1	2	3	4	5	6	7
5. I am sure that I am **NOT** required to file a tax return on interest income that I earn from money deposited in a bank account in New Zealand as it will be subject to income tax at source.	1	2	3	4	5	6	7
6. Similar to other criminal offences, I believe that individuals can also be prosecuted for not complying with the Income Tax Act.	1	2	3	4	5	6	7

	Strongly Disagree ▼			Neutral ▼			Strongly Agree ▼
7. To my knowledge, I can deduct all personal expenses in calculating my tax liability.	1	2	3	4	5	6	7
8. I believe that I do **NOT** have to abide by the deadline for the submission of tax return form(s) (in case of having other income such as rental and business income), as the deadline is only a guideline and does not result in penalties.	1	2	3	4	5	6	7
9. I have little idea about the deductions that I can claim as a taxpayer in the computation of my tax liability.	1	2	3	4	5	6	7
10. I think the terms used in tax publications (eg. IRD guide books) and in tax return forms are difficult for people like me to understand.	1	2	3	4	5	6	7
11. The sentences and wording in the Individual Income Tax Return Guide (IR3G) are lengthy and not user-friendly.	1	2	3	4	5	6	7
12. I do **NOT** have a problem with completing and filing the tax return form(s), if they are required.	1	2	3	4	5	6	7
13. I find it tedious to maintain all my relevant records for the whole year for tax purposes (if I have to complete the tax return form(s)).	1	2	3	4	5	6	7
14. The rules related to individual income tax are clear.	1	2	3	4	5	6	7
15. Most of the time I need to refer to others for assistance in dealing with tax matters.	1	2	3	4	5	6	7
16. I do **NOT** have to make a lot of effort to understand the explanations given in Inland Revenue Department guide books and other similar explanatory material.	1	2	3	4	5	6	7

SECTION C

Below are hypothetical tax scenarios and a number of statements that reflect compliance behaviour. Please circle one answer in each line that best describes how you feel about the statements.

Scenario 1

David is a sole proprietor of a business with taxable income of $50,000 a year, after deducting business expenses of $11,500. Before submitting his tax return form, he found out that these business expenses included an amount of $2,500 spent for his family holiday. He knows that if he does claim the $2,500 as business expense, he will pay less tax than he legally should. He could really use the tax dollars saved and he is confident that the Inland Revenue Department would not detect that the $2,500 is actually his personal expense. If there is a tax audit, he can argue that the trip is solely for business purposes. What would you do if you faced a similar situation in the future?

	Strongly Disagree			Neutral			Strongly Agree
1. I would claim the full deduction of $11,500, including the amount paid for my family trip.	1	2	3	4	5	6	7
2. I would **NOT** attempt to overstate the business expenses by $2,500.	1	2	3	4	5	6	7
3. My family and peers would think that I should overstate the business expenses by $2,500.	1	2	3	4	5	6	7
4. I would only claim a deduction for the actual amount spent for business purposes.	1	2	3	4	5	6	7
5. I would be upset if I overstated the business expenses by $2,500.	1	2	3	4	5	6	7
6. I would feel guilty if I overstated the business expenses by $2,500.	1	2	3	4	5	6	7
7. The likelihood of being audited by the Inland Revenue Department is low.	1	2	3	4	5	6	7
8. My family and peers would think that I should only claim the actual business expenses.	1	2	3	4	5	6	7
9. It would be financially beneficial for me to overstate the business expenses by $2,500.	1	2	3	4	5	6	7
10. My family and peers would approve of my decision to overstate the business expenses by $2,500.	1	2	3	4	5	6	7
11. I would feel pleased if I overstated the business expenses by $2,500.	1	2	3	4	5	6	7
12. My family and peers would **NOT** overstate the business expenses if faced with a similar situation.	1	2	3	4	5	6	7
13. With my tax knowledge, skills and resources, it would be very easy for me to overstate the business expenses by $2,500 successfully.	1	2	3	4	5	6	7
14. Due to my limited tax knowledge, skills and resources, it is hard for me to overstate the business expenses by $2,500 successfully.	1	2	3	4	5	6	7
15. I would successfully overstate the business expenses in my tax return form if I wanted to.	1	2	3	4	5	6	7
16. With my tax knowledge, skills and resources, I would have **NO** difficulty in overstating the business expenses by $2,500 successfully.	1	2	3	4	5	6	7
17. There are **NO** barriers that would prevent me from overstating the business expenses by $2,500 successfully.	1	2	3	4	5	6	7

Scenario 2

Sally is a full-time teacher with taxable income of $50,000 a year. As a hobby, she likes to make handicraft items during her leisure time. Her friends learnt about the attractive souvenirs and asked Sally to make some items for them. In return, they paid Sally $500 in total. Since then, she has received a lot of orders from her colleagues and other neighbours. As a full-time teacher, she did not have enough time to meet the orders on her own and asked assistance from her two sisters. She paid each of them 10 percent of the amount received. During that year, she made a net total amount of $10,500 out of her activity. Although she should declare all her income, she could really use the money by not declaring the $10,500. She is confident that the Inland Revenue Department would not detect this amount if she omits it from her tax return form since there is no record of the cash received. What would you do if you faced a similar situation in the future?

	Strongly Disagree ▼			Neutral ▼			Strongly Agree ▼
1. I would report my income fully, including the amount of $10,500 from the sales of handicrafts.	1	2	3	4	5	6	7
2. I would **NOT** attempt to cheat by omitting to report the extra amount of $10,500 in my tax return form.	1	2	3	4	5	6	7
3. My family and peers would think that I should **NOT** declare the extra $10,500.	1	2	3	4	5	6	7
4. I would **NOT** declare the $10,500 because that amount arises from trading goods with friends and neighbours.	1	2	3	4	5	6	7
5. I would be upset if I did **NOT** declare the extra amount of $10,500.	1	2	3	4	5	6	7
6. I would feel guilty if I did **NOT** declare that extra amount of $10,500.	1	2	3	4	5	6	7
7. The likelihood of being audited by the Inland Revenue Department is high.	1	2	3	4	5	6	7
8. My family and peers would think that I should declare the extra $10,500.	1	2	3	4	5	6	7
9. It would be financially beneficial for me **NOT** to declare the extra amount of $10,500.	1	2	3	4	5	6	7
10. My family and peers would approve of my decision to understate my income by $10,500.	1	2	3	4	5	6	7
11. I would feel pleased if I did **NOT** declare the extra amount of $10,500.	1	2	3	4	5	6	7
12. My family and peers would **NOT** understate the income if faced with a similar situation.	1	2	3	4	5	6	7
13. Due to my limited knowledge, skills and resources, it is hard for me to omit the $10,500 in my tax return form successfully.	1	2	3	4	5	6	7

	Strongly Disagree ▼			Neutral ▼			Strongly Agree ▼
14. With my tax knowledge, skills and resources, it would be definitely easy for me to **NOT** declare the extra amount of $10,500 in my tax return form successfully.	1	2	3	4	5	6	7
15. I would successfully omit the extra amount of $10,500 in my tax return form if I wanted to.	1	2	3	4	5	6	7
16. With my tax knowledge, skills and resources, I would have **NO** difficulty to omit the extra $10,500 in my tax return form successfully.	1	2	3	4	5	6	7
17. There are **NO** barriers that would prevent me from understating my income by $10,500 successfully.	1	2	3	4	5	6	7

SECTION D

Please tick (✓) where appropriate.

1. Age:

☐ Under 20
☐ 20-29
☐ 30-39
☐ 40-49
☐ 50-59
☐ 60 or over

2. Gender:

☐ Male
☐ Female

3. Ethnicity:

☐ New Zealand European
☐ Maori
☐ Polynesian
☐ Indian
☐ Chinese
☐ Non-Chinese Asian
☐ Other

4. Relationship Status:

☐ Married
☐ De facto
☐ Civil union
☐ Single
☐ Other

5. Number of Dependents: _____

6. Level of Education:

☐ Do not have any or much formal schooling
☐ NZ School Certificate Year 11 or NCEA Level 1
☐ NZ Sixth Form Certificate Year 12 or NCEA Level 2
☐ NZ University Entrance Qualification Year 13 or NCEA Level 3
☐ Diploma or Degree
☐ Honours degree
☐ Masters or PhD

7. Occupation: _____

8. Annual Income (personal) Before Tax:

- ☐ Less than $20,000
- ☐ $20,000 - $30,000
- ☐ $30,001 - $40,000
- ☐ $40,001 - $50,000
- ☐ $50,001 - $60,000
- ☐ $60,001 - $70,000
- ☐ $70,001 or more

9. Main Source of Income:

- ☐ Salary/Wages
- ☐ Interest/Dividends
- ☐ Rent
- ☐ Royalties
- ☐ Self-Employed
- ☐ Benefits from the government
- ☐ Other, please specify_____

10. Number of Years of Work Experience:

- ☐ Less than one year
- ☐ 1 – 4 years
- ☐ 5 – 9 years
- ☐ 10 – 19 years
- ☐ 20 years or more

11. Geographical (Provincial) Area:

- ☐ Auckland, Wellington and Canterbury
- ☐ Waikato, Bay of Plenty, Hawke's Bay and Otago
- ☐ Northland, Gisborne, Taranaki, Manawatu Wanganui, Nelson and Southland
- ☐ West Coast, Tasman & Marlborough
- ☐ Other

12. How many times have you (or your representative, such as tax consultant, spouse, etc) filed an income tax return or personal tax summary?

- ☐ Never (go to Question 14)
- ☐ Once
- ☐ 2 – 5 times
- ☐ More than 5 times

13. When was the last time you lodged an income tax return or personal tax summary?

- ☐ 2008
- ☐ 2007
- ☐ 2006
- ☐ 2005
- ☐ Not lodged in last 5 years

14. Have you had experience dealing with the Inland Revenue?

- ☐ Never
- ☐ Once
- ☐ 2 – 5 times
- ☐ More than 5 times

15. Please state if you have any comments on:

a. Fairness of the income tax system

_____.

b. Complexity of the income tax system

_____.

c. Knowledge of the income tax system

_____.

d. Tax compliance behaviour of individual taxpayers

_____.

8

Thank you for taking the time to complete this questionnaire. Your assistance in providing this information is very much appreciated. If you are interested to participate in an interview, please provide your correspondence details in the attached consent form.

Please return your completed questionnaire in the enclosed envelope to:

Natrah Saad
Department of Accountancy, Finance and Information Systems
University of Canterbury
Private Bag 4800
Christchurch 8140
New Zealand.

Appendix 4

A Sample of Survey Questionnaire – Malaysian Version

Kolej Perniagaan dan Ekonomi

TANGGAPAN KEADILAN
DAN GELAGAT KEPATUHAN
PEMBAYAR CUKAI

Sila masukkan borang soal selidik yang telah lengkap diisi ke dalam sampul surat yang disertakan dan kembalikan kepada:

Natrah Saad
Bangunan Perakaunan
Kolej Perniagaan
Universiti Utara Malaysia
06010 Sintok
Kedah Darul Aman

Kepada Peserta,

1. Borang soal selidik ini tidak akan mengambil masa anda lebih daripada 30 minit untuk dilengkapkan. Ia mengandungi pernyataan yang memerlukan pandangan anda. Tiada jawapan yang betul atau salah.

2. Selain itu, tuan/puan juga dipelawa untuk mengambil bahagian dalam temu bual yang akan diadakan kemudian pada tahun ini.

3. Sila hantar maklum balas anda dalam borang persetujuan untuk ditemu bual (sekiranya bersetuju) menggunakan sampul surat yang disertakan.

4. Untuk memastikan maklum balas dalam borang kaji selidik adalah rahsia, individu selain penyelidik dan penyelianya akan diminta untuk membuka sampul surat dan mengasingkan borang kaji selidik yang telah dilengkapkan daripada borang persetujuan. Justeru, identiti anda tidak akan dikaitkan dengan maklum balas anda dalam borang kaji selidik ini.

5. Sila hantar maklum balas anda dan borang persetujuan untuk ditemu bual (sekiranya bersetuju) dalam tempoh empat (4) minggu menggunakan sampul surat bersetem yang disertakan.

Terima kasih. Maklum balas daripada anda amatlah diharapkan.

Yang benar,

NATRAH SAAD
Pelajar Phd
Emel: nbs24@student.canterbury.ac.nz
Tel: (04) 575 6784

DR ADRIAN SAWYER
Profesor Pencukaian
Emel: adrian.sawyer@canterbury.ac.nz

1

BAHAGIAN A

Pernyataan berikut merupakan pandangan anda tentang keadilan dalam sistem cukai pendapatan di Malaysia. Sila bulatkan satu jawapan dalam setiap baris yang paling sesuai menggambarkan pandangan anda tentang sistem cukai pendapatan.

	Sangat Tidak Bersetuju ▼			Neutral ▼			Sangat Bersetuju ▼
1. Saya percaya Kerajaan membelanjakan jumlah yang berpatutan daripada hasil cukai untuk mencapai matlamat sosial seperti memperuntukkan bantuan kepada keluarga berpendapatan rendah.	1	2	3	4	5	6	7
2. Saya percaya bahawa saya membayar bahagian cukai pendapatan saya yang sepatutnya mengikut sistem cukai pendapatan semasa.	1	2	3	4	5	6	7
3. Saya percaya setiap orang membayar bahagian cukai pendapatan mereka yang sepatutnya mengikut sistem cukai pendapatan semasa.	1	2	3	4	5	6	7
4. Saya mendapat nilai yang sepatutnya daripada Kerajaan bagi cukai pendapatan yang telah saya bayar (contohnya manfaat).	1	2	3	4	5	6	7
5. Terdapat beberapa cara untuk saya membuat pembetulan dalam pengiraan tanggungan cukai pendapatan saya, jika perlu, tanpa sebarang kos.	1	2	3	4	5	6	7
6. Berbanding dengan pembayar cukai yang lain, saya membayar lebih daripada bahagian cukai pendapatan saya yang sepatutnya.	1	2	3	4	5	6	7
7. Individu yang mempunyai jumlah pendapatan yang sama perlu membayar jumlah cukai pendapatan yang sama.	1	2	3	4	5	6	7
8. Saya berpendapat bahawa Kerajaan membelanjakan terlalu banyak pendapatan daripada cukai untuk bantuan kebajikan yang tidak perlu.	1	2	3	4	5	6	7
9. Sememangnya adil bagi golongan berpendapatan tinggi tertakluk kepada kadar cukai progresif yang lebih tinggi berbanding golongan berpendapatan sederhana.	1	2	3	4	5	6	7
10. Memang sepatutnya mereka yang memperoleh pendapatan kasar yang sama sebelum cukai untuk mempunyai jumlah pendapatan bersih yang sama selepas cukai. Sebagai contoh, sekiranya seseorang individu memperoleh pendapatan sebelum cukai sebanyak RM100,000 membayar cukai sebanyak RM20,000, maka setiap individu lain yang memperoleh pendapatan sebelum cukai sebanyak RM100,000 juga akan mempunyai pendapatan bersih selepas cukai sebanyak RM80,000.	1	2	3	4	5	6	7

	Sangat Tidak Bersetuju			Neutral			Sangat Bersetuju
11. Memang sepatutnya setiap individu yang dengan sengaja mengelak membayar cukai dikenakan jumlah penalti yang sama tanpa mengira jumlah cukai yang tidak dibayar.	1	2	3	4	5	6	7
12. Saya percaya bahawa saya sepatutnya membayar bahagian cukai pendapatan yang sama dengan pembayar cukai lain yang mempunyai pendapatan yang sama.	1	2	3	4	5	6	7
13. Memang sepatutnya golongan berpendapatan rendah menerima lebih banyak manfaat daripada Kerajaan berbanding golongan berpendapatan tinggi.	1	2	3	4	5	6	7
14. Memang sepatutnya golongan berpendapatan sederhana dikenakan cukai pada kadar yang lebih rendah berbanding golongan berpendapatan tinggi.	1	2	3	4	5	6	7
15. Golongan berpendapatan sederhana membayar bahagian cukai pendapatan mereka yang sepatutnya.	1	2	3	4	5	6	7
16. Pentadbiran sistem cukai pendapatan oleh Lembaga Hasil Dalam Negeri (LHDN) adalah konsisten setiap tahun dan ke atas setiap pembayar cukai.	1	2	3	4	5	6	7
17. Jumlah cukai pendapatan yang saya bayar adalah tinggi berbanding manfaat yang saya terima daripada Kerajaan.	1	2	3	4	5	6	7
18. Jumlah cukai pendapatan yang dibayar oleh golongan berpendapatan tinggi adalah terlalu tinggi.	1	2	3	4	5	6	7
19. Untuk berlaku adil, hukuman bagi mereka yang mengelak cukai hendaklah bergantung pada tahap ketidakpatuhan mereka.	1	2	3	4	5	6	7
20. Saya percaya kadar penalti permulaan sebanyak 5 peratus bagi pembayaran lewat terhadap cukai tidak berbayar yang dikenakan ke atas pembayar cukai yang ingkar menurut sistem cukai semasa adalah wajar.	1	2	3	4	5	6	7

BAHAGIAN B

Pernyataan berikut merupakan tanggapan peribadi berkaitan dengan pengetahuan seseorang tentang cukai dan tahap kesukaran sistem cukai pendapatan. Sila bulatkan satu jawapan dalam setiap baris yang paling sesuai menggambarkan tanggapan anda tentang pernyataan tersebut.

	Sangat Tidak Bersetuju			Neutral			Sangat Bersetuju
1. Sistem cukai pendapatan merupakan satu cara yang sah bagi Kerajaan menjana pendapatan untuk mengurus ekonomi.	1	2	3	4	5	6	7

	Sangat Tidak Bersetuju ▼			Neutral ▼			Sangat Bersetuju ▼
2. Sepanjang pengetahuan saya, pembayar cukai yang ingkar boleh dipenjarakan sekiranya didapati bersalah mengelak cukai dengan sengaja.	1	2	3	4	5	6	7
3. Sepanjang pengetahuan saya, di bawah sistem cukai semasa, semua individu tertakluk kepada kadar cukai yang sama.	1	2	3	4	5	6	7
4. Sepanjang pengetahuan saya, setiap orang yang memperoleh pendapatan di negara ini perlu mendaftar dengan Lembaga Hasil Dalam Negeri (LHDN), sama ada orang itu pemastautin atau sebaliknya.	1	2	3	4	5	6	7
5. Saya yakin saya **TIDAK** perlu memfailkan penyata cukai bagi pendapatan faedah yang saya peroleh daripada wang yang disimpan di dalam akaun bank di Malaysia kerana ia telah dikenakan cukai pendapatan terlebih dahulu.	1	2	3	4	5	6	7
6. Seperti kesalahan jenayah yang lain, saya percaya setiap individu juga boleh didakwa sekiranya tidak mematuhi Akta Cukai Pendapatan.	1	2	3	4	5	6	7
7. Sepanjang pengetahuan saya, saya boleh menolak semua perbelanjaan peribadi dalam pengiraan tanggungan cukai.	1	2	3	4	5	6	7
8. Saya percaya saya **TIDAK** perlu mematuhi tarikh akhir untuk menyerahkan Borang Nyata Cukai kerana tarikh tersebut hanya merupakan garis panduan dan tidak akan melibatkan sebarang penalti.	1	2	3	4	5	6	7
9. Saya tidak berapa tahu tentang penolakan yang boleh saya tuntut sebagai pembayar cukai dalam pengiraan tanggungan cukai.	1	2	3	4	5	6	7
10. Saya berpendapat bahawa ungkapan yang digunakan di dalam bahan cetakan cukai (seperti buku panduan LHDN) dan Borang Nyata Cukai sukar untuk difahami.	1	2	3	4	5	6	7
11. Ayat dan perkataan yang digunakan di dalam Buku Panduan Penyata Cukai Pendapatan Individu adalah panjang dan tidak mesra pengguna.	1	2	3	4	5	6	7
12. Saya **TIDAK** menghadapi masalah untuk mengisi dan menyerahkan Borang Nyata Cukai.	1	2	3	4	5	6	7
13. Saya rasa memang sukar untuk menyimpan semua rekod yang berkaitan sepanjang tahun itu bagi tujuan cukai (jika saya perlu mengisi Borang Nyata Cukai).	1	2	3	4	5	6	7
14. Saya **TIDAK** menghadapi kesukaran untuk memahami penerangan yang diberikan di dalam buku panduan LHDN atau bahan penerangan lain yang sama.	1	2	3	4	5	6	7

	Sangat Tidak Bersetuju			Neutral			Sangat Bersetuju
15. Peraturan berkaitan dengan cukai pendapatan individu adalah jelas.	1	2	3	4	5	6	7
16. Biasanya saya perlu mendapatkan bantuan daripada orang lain bagi urusan berkaitan dengan cukai.	1	2	3	4	5	6	7

BAHAGIAN C

Berikut merupakan situasi cukai (andaian) dan beberapa pernyataan berkaitan dengan gelagat kepatuhan cukai. Sila bulatkan satu jawapan dalam setiap baris yang paling sesuai menggambarkan pendapat anda tentang pernyataan tersebut.

Situasi 1

Daud merupakan pemilik tunggal suatu perniagaan dengan pendapatan bercukai sebanyak RM50,000 setahun, selepas ditolak belanja perniagaan sebanyak RM11,500. Sebelum menghantar Borang Nyata Cukai, dia mendapati belanja perniagaan ini termasuk belanja yang digunakan untuk percutian keluarga berjumlah RM2,500. Dia tahu, sekiranya RM2,500 itu dituntut sebagai belanja perniagaan, dia akan membayar jumlah cukai yang kurang daripada jumlah yang sepatutnya dibayar mengikut undang-undang. Dia boleh menggunakan wang cukai yang tidak perlu dibayar itu dan dia yakin Lembaga Hasil Dalam Negeri (LHDN) tidak akan dapat mengesan bahawa RM2,500 itu adalah belanja peribadinya. Sekiranya audit cukai dilakukan, dia boleh mengatakan bahawa belanja perjalanan itu semata-mata untuk tujuan perniagaan. Apakah yang akan anda lakukan sekiranya berhadapan dengan situasi yang sama pada masa depan?

	Sangat Tidak Bersetuju			Neutral			Sangat Bersetuju
1. Saya akan membuat penolakan penuh sebanyak RM11,500, termasuk jumlah yang dibayar untuk percutian keluarga.	1	2	3	4	5	6	7
2. Saya **TIDAK** akan memasukkan belanja perniagaan sebanyak RM2,500.	1	2	3	4	5	6	7
3. Keluarga dan rakan saya berpendapat bahawa saya perlu memasukkan belanja perniagaan sebanyak RM2,500.	1	2	3	4	5	6	7
4. Saya akan membuat tolakan ke atas belanja sebenar yang digunakan untuk tujuan perniagaan sahaja.	1	2	3	4	5	6	7
5. Saya akan berasa susah hati sekiranya saya memasukkan belanja perniagaan sebanyak RM2,500.	1	2	3	4	5	6	7
6. Saya akan berasa bersalah sekiranya saya memasukkan belanja perniagaan sebanyak RM2,500.	1	2	3	4	5	6	7
7. Kemungkinan untuk diaudit oleh LHDN adalah rendah.	1	2	3	4	5	6	7

	Sangat Tidak Bersetuju			Neutral			Sangat Bersetuju
8. Keluarga dan rakan saya berpendapat bahawa saya sepatutnya membuat tolakan hanya ke atas belanja perniagaan sebenar sahaja.	1	2	3	4	5	6	7
9. Saya akan mendapat manfaat dari segi kewangan sekiranya saya memasukkan belanja perniagaan sebanyak RM2,500.	1	2	3	4	5	6	7
10. Keluarga dan rakan saya akan bersetuju dengan keputusan saya untuk memasukkan belanja perniagaan sebanyak RM2,500.	1	2	3	4	5	6	7
11. Saya akan berasa lega sekiranya saya memasukkan belanja perniagaan sebanyak RM2,500.	1	2	3	4	5	6	7
12. Keluarga dan rakan saya **TIDAK** akan memasukkan belanja perniagaan sekiranya mereka berhadapan dengan situasi yang sama.	1	2	3	4	5	6	7
13. Dengan pengetahuan cukai, kepakaran dan sumber yang saya ada, maka saya dengan mudah dapat memasukkan belanja perniagaan sebanyak RM2,500 itu.	1	2	3	4	5	6	7
14. Disebabkan pengetahuan cukai, kepakaran dan sumber yang saya ada adalah terhad, maka sukar bagi saya memasukkan belanja perniagaan sebanyak RM2,500 itu.	1	2	3	4	5	6	7
15. Sekiranya saya mahu, saya boleh memasukkan belanja perniagaan itu dalam Borang Nyata Cukai saya.	1	2	3	4	5	6	7
16. Dengan pengetahuan cukai, kepakaran dan sumber yang saya ada, maka saya **TIDAK** menghadapi masalah untuk memasukkan belanja perniagaan sebanyak RM2,500 itu.	1	2	3	4	5	6	7
17. **TIADA** sebarang halangan yang boleh menghalang saya daripada memasukkan belanja perniagaan sebanyak RM2,500 itu.	1	2	3	4	5	6	7

Situasi 2

Salina merupakan guru sepenuh masa dengan pendapatan bercukai sebanyak RM50,000 setahun. Sebagai hobi, dia gemar membuat barangan kraf tangan pada waktu lapang. Beberapa rakannya mendapat tahu tentang hasil kraf tangan yang cantik itu dan memintanya membuat beberapa kraf tangan untuk mereka. Sebagai balasan, mereka membayar RM500 kepadanya. Semenjak itu, dia menerima banyak tempahan daripada rakan dan jirannya. Sebagai guru sepenuh masa, dia tidak mempunyai masa yang cukup untuk memenuhi tempahan itu dan meminta bantuan dua orang adiknya. Dia membayar setiap seorang daripada adiknya sebanyak 10 peratus daripada jumlah wang yang diterimanya. Pada tahun tersebut, dia mendapat jumlah pendapatan bersih sebanyak RM10,500 daripada jualan hasil kraf tangannya itu. Walaupun dia perlu mengisytiharkan semua pendapatannya, dia berpendapat jumlah tersebut boleh digunakan sepenuhnya sekiranya tidak diisytiharkan. Dia yakin Lembaga Hasil Dalam Negeri (LHDN) tidak akan dapat mengesan jumlah tersebut jika dia tidak memasukkannya ke dalam Borang Nyata Cukai kerana tiada sebarang rekod menunjukkan penerimaan tunai. Apakah yang akan anda lakukan sekiranya berhadapan dengan situasi yang sama pada masa depan?

	Sangat Tidak Bersetuju ▼			Neutral ▼			Sangat Bersetuju ▼
1. Saya akan melaporkan semua pendapatan saya termasuk RM10,500 hasil jualan kraf tangan itu.	1	2	3	4	5	6	7
2. Saya **TIDAK** akan cuba menipu dengan tidak mengisytiharkan sejumlah RM10,500 dalam Borang Nyata Cukai.	1	2	3	4	5	6	7
3. Keluarga dan rakan saya berpendapat bahawa saya **TIDAK** perlu mengisytiharkan RM10,500 itu.	1	2	3	4	5	6	7
4. Saya **TIDAK** akan mengisytiharkan RM10,500 itu kerana ia hasil jualan kepada rakan dan jiran saya.	1	2	3	4	5	6	7
5. Saya akan berasa susah hati sekiranya saya **TIDAK** mengisytiharkan wang RM10,500 itu.	1	2	3	4	5	6	7
6. Saya akan berasa bersalah sekiranya saya **TIDAK** mengisytiharkan wang RM10,500 itu.	1	2	3	4	5	6	7
7. Kemungkinan untuk diaudit oleh LHDN adalah tinggi.	1	2	3	4	5	6	7
8. Keluarga dan rakan saya berpendapat bahawa saya sepatutnya mengisytiharkan wang RM10,500 itu.	1	2	3	4	5	6	7
9. Saya akan mendapat manfaat dari segi kewangan sekiranya saya **TIDAK** mengisytiharkan wang RM10,500 itu.	1	2	3	4	5	6	7
10. Keluarga dan rakan saya akan bersetuju dengan keputusan saya untuk **TIDAK** mengisytiharkan wang RM10,500 itu.	1	2	3	4	5	6	7
11. Saya akan berasa lega sekiranya saya **TIDAK** mengisytiharkan wang RM10,500 itu.	1	2	3	4	5	6	7

	Sangat Tidak Bersetuju ▼			Neutral ▼			Sangat Bersetuju ▼
12. Keluarga dan rakan saya **TIDAK** akan mengisytiharkan wang RM10,500 itu sekiranya berhadapan dengan situasi yang sama.	1	2	3	4	5	6	7
13. Disebabkan pengetahuan cukai, kepakaran dan sumber yang saya ada adalah terhad, maka sukar bagi saya untuk tidak mengisytiharkan wang RM10,500 itu dalam Borang Nyata Cukai saya.	1	2	3	4	5	6	7
14. Dengan pengetahuan cukai, kepakaran dan sumber yang saya ada, maka sememangnya mudah bagi saya untuk **TIDAK** mengisytiharkan wang RM10,500 dalam Borang Nyata Cukai saya.	1	2	3	4	5	6	7
15. Sekiranya saya mahu, saya boleh menyembunyikan wang RM10,500 itu.	1	2	3	4	5	6	7
16. Dengan pengetahuan cukai, kepakaran dan sumber yang saya ada, maka saya **TIDAK** menghadapi masalah untuk menyembunyikan wang RM10,500 itu.	1	2	3	4	5	6	7
17. **TIADA** sebarang halangan yang boleh menghalang saya daripada menyembunyikan wang RM10,500 tersebut.	1	2	3	4	5	6	7

BAHAGIAN D

Sila tandakan (✓) di mana yang berkenaan.

1. Umur:

☐ Bawah 30 tahun
☐ 30-39 tahun
☐ 40-49 tahun
☐ 50-59 tahun
☐ 60 tahun atau lebih

2. Jantina:

☐ Lelaki
☐ Perempuan

3. Bangsa:

☐ Melayu
☐ Cina
☐ India
☐ Lain-lain

4. Taraf Perkahwinan:

☐ Berkahwin
☐ Belum berkahwin

5. Tahap Pendidikan:

☐ Sijil Pelajaran Malaysia
☐ Sijil Tinggi Pelajaran Malaysia atau Sijil
☐ Diploma atau Ijazah
☐ Ijazah Sarjana atau Doktor Falsafah

6. Pekerjaan:_____

7. Pendapatan tahunan sebelum cukai:

- ☐ Kurang daripada RM40,000
- ☐ RM40,000-RM50,000
- ☐ RM50,001-RM60,000
- ☐ RM60,001-RM70,000
- ☐ RM70,001-RM80,000
- ☐ RM80,001 atau lebih

8. Sektor Pekerjaan:

- ☐ Sektor awam
- ☐ Sektor swasta

9. Jumlah Tanggungan: _____

10. Pengalaman Kerja:

- ☐ Kurang daripada setahun
- ☐ 1-4 tahun
- ☐ 5-9 tahun
- ☐ 10-19 tahun
- ☐ 20 tahun atau lebih

11. Kawasan Geografi:

- ☐ Perlis, Kedah, Penang dan Perak
- ☐ Kuala Lumpur dan Selangor
- ☐ Negeri Sembilan, Melaka dan Johor
- ☐ Pahang, Kelantan dan Terengganu

12. Berapa kalikah anda (atau wakil anda, seperti perunding cukai, pasangan anda dan sebagainya) memfailkan Borang Cukai Pendapatan?

- ☐ Tidak pernah (terus ke Soalan 14)
- ☐ Sekali
- ☐ 2 – 5 kali
- ☐ Lebih daripada 5 kali

13. Bilakah kali terakhir anda memfailkan Borang Nyata Cukai Pendapatan?

- ☐ 2008
- ☐ 2007
- ☐ 2006
- ☐ 2005
- ☐ Tidak memfailkannya sejak 5 tahun lalu

14. Adakah anda pernah berurusan dengan Lembaga Hasil Dalam Negeri?

- ☐ Tidak pernah
- ☐ Sekali
- ☐ 2 – 5 kali
- ☐ Lebih daripada 5 kali

15. Sila nyatakan komen anda (sekiranya ada) berkaitan dengan:

a. Keadilan sistem cukai pendapatan

_____

b. Tahap kesukaran sistem cukai pendapatan

_____

c. Pengetahuan berkaitan dengan sistem cukai pendapatan

_____

d. Gelagat kepatuhan pembayar cukai individu

_____

Terima kasih kerana meluangkan masa mengisi borang soal selidik ini. Kerjasama anda dalam memberikan maklumat tersebut amatlah dihargai.

Sekiranya anda berminat untuk mengambil bahagian dalam sesi temu bual, sila nyatakan maklumat berkaitan di dalam borang persetujuan yang dilampirkan.

Sila masukkan borang soal selidik yang telah lengkap diisi
ke dalam sampul surat yang disertakan dan kembalikan kepada:

Natrah Saad
Bangunan Perakaunan
Kolej Perniagaan
Universiti Utara Malaysia
06010 Sintok
Kedah Darul Aman

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Appendix 5

Model Constructs and Measures

Constructs	Component Measures	Item Measures	Item Codes
Fairness Perceptions (FAIR)	General Fairness (GF)	I believe the government utilizes a reasonable amount of tax revenue to achieve social goals, such as the provision of benefits for low income families.	GF1
		I believe everyone pays their fair share of income tax under the current income tax system	GF2
		I think the government spends too much tax revenue on unnecessary welfare assistance.	GF3R
	Exchange Fairness (EF)	I receive fair value from the government in return for my income tax paid (e.g. benefits)	EF1
		It is fair that low-income earners receive more benefits from the government compared to high-income earners.	EF2
		The income taxes that I have to pay are high considering the benefits I receive from the government.	EF3R
	Horizontal Fairness (HF)	It is fair for individuals with similar amounts of income to pay a similar amount of income tax.	HF1
		I believe it is fair for me to pay a similar share of income tax compared with other taxpayers earning an equivalent amount of income.	HF2
		It is fair that 'equals before tax are equals after tax'. For example, if a person earning $100,000 before tax pays $20,000 tax, everyone earning $100,000 income before tax should be left with $80,000 after tax.	HF3
	Vertical Fairness (VF)*	It is fair that high-income earners are subject to tax at progressively higher tax rates than low-income earners.	VF1
		It is fair that low-income earners are taxed at a lower rate than middle-income earners.	VF2
		The share of the total income taxes paid by high-income earners is much too high.	VF3R
	Retributive Fairness (RF)	It is fair that individuals who deliberately evade paying their taxes should be penalised with the same amount of penalty regardless of the amount of tax evaded.	RF1R
		To be fair, the degree of punishment for evading tax should depend on the degree of non-compliance.	RF2
		I believe the initial late payment penalty on the unpaid tax, imposed on non-compliant taxpayers under the current tax system, is fair.	RF3
	Personal Fairness (PF)	I believe that I pay my fair share of the tax burden under the current income tax system.	PF1
		Compared to other taxpayers, I pay more than my fair share of income tax.	PF2R
		Middle-income earners pay their fair share of income tax.	PF3

	Administrative Fairness (AF)	There are a number of ways available to me to correct errors in the calculation of my tax liability, if necessary, at no additional cost.	AF1
		The administration of the income tax system by the Inland Revenue Department is consistent across years and taxpayers.	AF2
Tax Knowledge (KNOWL)	General Knowledge (GK)	The income tax system is a legitimate way for the government to collect revenue to manage an economy.	GK1
		To my knowledge, individuals are subject to a single flat rate of income tax under the current tax system.	GK2R
	Legal Knowledge (LK)	As far as I am aware, non-compliant taxpayers can be imprisoned, if found guilty of evading tax.	LK1
		Similar to other criminal offences, I believe that individuals can also be prosecuted for not complying with the Income Tax Act.	LK2
		I believe that I do not have to abide by the deadline for the submission of tax return form (s) (in case of having other income such as rental and business income), as the deadline is only a guideline and does not result in penalties.	LK3R
	Technical Knowledge (TK)**	As far as I am aware, everyone who earns income sourced in this country is taxable, regardless of whether that person is resident or not.	TK1
		I am sure that I am not required to file a tax return on interest income that I earn from money deposited in a bank account in New Zealand as it will be subject to income tax at source.	TK2
		To my knowledge, I can deduct all personal expenses in calculating my tax liability.	TK3R
		I have little idea about the deductions that I can claim as a taxpayer in the computation of my tax liability.	TK4R
Tax Complexity (COMPLX)	Content Complexity (CT)	I think the term used in tax publications (eg. IRD guide books) and in tax return forms are difficult for people like me to understand.	CT1R
		The sentences and wording in the Individual Income Tax Return Guide (IR3G) are lengthy and not user-friendly.	CT2R
		The rules related to individual income tax are clear.	CT3
		Most of the time I need to refer to others for assistance in dealing with tax matters.	CT4R
	Compliance Complexity (CM)	I do not have a problem with completing and filing the tax return form(s), if they are required.	CM1
		I find it tedious to maintain all my relevant records for the whole year for tax purposes (if I have to complete the tax return form(s)).	CM2R
		I do not have to make a lot of effort to understand the explanations given in Inland Revenue Department guide books and other similar explanatory material.	CM3

Intention to Comply (IND)	I would claim the full deduction of $11,500, including the amount paid for my family trip.	IND1R
	I would not attempt to overstate the business expenses by $2,500.	IND2
	I would only claim a deduction for the actual amount spent for business purposes.	IND3
Affective Attitude (AFD)	I would be upset if I overstated the business expenses by $2,500.	AFD1
	I would feel guilty if I overstated the business expenses by $2,500.	AFD2
	I would feel pleased if I overstated the business expenses by $2,500.	AFD3R
Instrumental Attitude (ISD)	The likelihood of being audited by the Inland Revenue Department is low.	ISD1R
	It would be financially beneficial for me to overstate the business expenses by $2,500.	ISD2R
Subjective Norms (SND)	My family and peers would think that I should overstate the business expenses by $2,500.	SND1R
	My family and peers would think that I should only claim the actual business expenses.	SND2
	My family and peers would approve of my decision to overstate the business expenses by $2,500.	SND3R
	My family and peers would not overstate the business expenses if faced with a similar situation.	SND4
Perceived Behavioural Control (PBD)	With my tax knowledge, skills and resources, it would be very easy for me to overstate the business expenses by $2,500 successfully.	PBD1
	Due to my limited tax knowledge, skills and resources, it is hard for me to overstate the business expenses by $2,500 successfully.	PBD2R
	I would successfully overstate the business expenses in my tax return form if I wanted to.	PBD3
	With my tax knowledge, skills and resources, I would have no difficulty in overstating the business expenses by $2,500 successfully.	PBD4
	There are no barriers that would prevent me from overstating the business expenses by $2,500 successfully.	PBD5
Intention to Comply (INS)	I would report my income fully, including the amount of $10,500 from the sales of handicrafts.	INS1
	I would not attempt to cheat by omitting to report the extra amount of $10,500 in my tax return form.	INS2
	I would not declare the $10,500 because that amount arises from trading goods with friends and neighbours.	INS3R
Affective Attitude (AFS)	I would be upset if I did not declare the extra amount of $10,500.	AFS1
	I would feel guilty if I did not declare that extra amount of $10,500.	AFS2
	I would feel pleased if I did not declare the extra amount of $10,500.	AFS3R
Instrumental Attitude (ISS)	The likelihood of being audited by the Inland Revenue Department is high.	ISS1
	It would be financially beneficial for me not to declare the extra amount of $10,500.	ISS2R

Subjective Norms (SNS)	My family and peers would think that I should not declare the extra $10,500.	SNS1R
	My family and peers would think that I should declare the extra $10,500.	SNS2
	My family and peers would approve of my decision to understate my income by $10,500.	SNS3R
	My family and peers would not understate the income if faced with a similar situation.	SNS4
Perceived Behavioural Control (PBS)	Due to my limited knowledge, skills and resources, it is hard for me to omit the $10,500 in my tax return form successfully.	PBS1R
	With my tax knowledge, skills and resources, it would be definitely easy for me to not declare the extra amount of $10,500 in my tax return form successfully.	PBS2
	I would successfully omit the extra amount of $10,500 in my tax return form if I wanted to.	PBS3
	With my tax knowledge, skills and resources, I would have no difficulty to omit the extra $10,500 in my tax return form successfully.	PBS4
	There are no barriers that would prevent me from understating my income by $10,500 successfully.	PBS5

*There are slight differences in items VF1 and VF2 between New Zealand and the Malaysian counterpart. In Malaysia, the term 'middle-income' is used (instead of 'low-income' as in New Zealand), since low-income earners are not subject to tax in Malaysia.
**There is slight difference in item TK1 between New Zealand and the Malaysian counterpart. The change was made to the Malaysian scenario to accommodate the differences between the two environments.

Appendix 6

List of interview questions

1. What do you think of the current income tax system?
2. Is it fair/unfair? Could you please elaborate on the aspects that you think it is fair/unfair.
3. If you're given a chance to improve the current tax system, which aspect would you focus on?
4. About compliance behaviour, do you believe that generally taxpayers from every level of income comply?
5. Do you think that compliance behaviour is affected by people's perceptions on the fairness of the income tax system?
6. How do you rate your current knowledge of tax? Which aspect of tax knowledge that you think that you are lacking of? Do you think that taxpayers have at least average level of tax knowledge?
7. Do you think that if you have sufficient knowledge, your perception on fairness would be different? In your opinion, how does knowledge of taxation affect one's perception on the tax system and compliance behaviour?
8. How do you perceive the complexity of the tax system? Does the level of complexity lead to fairness perceptions and compliance behaviour?
9. Do you believe that a simpler tax system would improve fairness perceptions and compliance behaviour?
10. Do you think the middle-income earners are being treated fairly under the current tax system?
11. What is your opinion about the belief that high-income earners can easily evade tax with the help from tax consultants?
12. Do you agree that the low-income earners receive a lot of benefits despite of the low tax paid?
13. Any other comments?

Appendix 7

A Sample of Accompanying Letter to Questionnaires – New Zealand

College of Business and Economics

Natrah Saad
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UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

29 August 2008

SURVEY ON FAIRNESS PERCEPTIONS AND COMPLIANCE BEHAVIOUR

Dear Participant,

I am Natrah Saad, currently pursuing my doctoral study in the Department of Accountancy, Finance and Information Systems, of the University of Canterbury, Christchurch. This doctoral degree programme requires me to undertake a substantial research project in related areas of taxation. To fulfil this requirement, I have embarked on a comparative study into tax fairness perceptions and compliance behaviour in Malaysia and New Zealand.

The success of this project depends greatly on your participation in completing this questionnaire.

Your name was randomly selected from the 2008 Electoral Roll. This questionnaire is anonymous and you will not be identified as a participant without your express consent. Since this is a postal questionnaire, you may withdraw your participation, including the withdrawal of any information you have provided, until your questionnaire has been posted.

By completing this questionnaire it will be understood that you have consented to participate in this research project, and that you consent to the publication of the collective results of the research project with the understanding that your anonymity will be preserved.

In addition to completing the questionnaire, I would like to invite you to take part in an interview later in the year. While this is merely an invitation and you are not required to take part, your willingness to do so would be very much appreciated. You can indicate your consent to participate in the interview by writing your contact details on the consent form included in this package. If you provide your consent, I will contact you in person to arrange a time and place for the interview session.

The interview will take approximately 60 to 90 minutes. The topics I intend to cover in the session are tax fairness perceptions, compliance behaviour, tax knowledge and tax complexity. While these topics have been raised in the questionnaire, this interview provides an opportunity for you to share more of your thoughts on the issues that would be vital for the success of this study.

To ensure the researcher correctly understands the information given during the session, the interview will be recorded by audiotape. Your specific approval, however, will be requested prior to the commencing of the session. To confirm the correctness of the information transcribed, you will also be offered the opportunity to check the transcript of the interview.

1

As for the questionnaire, you may also withdraw your participation, including the withdrawal of any information you have provided, at any time until the conclusion of the interview session.

All information provided in the questionnaire and interviews will be treated as strictly confidential. These responses will only be available to my academic supervisors, Professor Adrian Sawyer and Andrew Maples, and myself. To ensure the confidentiality of the identifying information provided during the interview, they will be securely stored and subsequently destroyed upon completion of my research project. Furthermore, any results obtained are to be reported collectively without attribution to any particular individual.

Should you have any concerns or queries about participating in this research, you may contact my principal academic supervisor Professor Adrian Sawyer (at (03) 364 2617) or myself (at (03) 364 2613 ext. 7379). We will be pleased to discuss any concerns you may have.

This research project has been reviewed and approved by the University of Canterbury's Human Ethics Committee.

Thank you for participating. I look forward to receiving your responses.

Yours faithfully,

NATRAH SAAD
Phd Student
University of Canterbury
Email: nbs24@student.canterbury.ac.nz
Tel: (03) 364 2613 Ext. 7379

DR ADRIAN SAWYER
Professor of Taxation
University of Canterbury
Email: adrian.sawyer@canterbury.ac.nz
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Appendix 8

A Sample of Accompanying Letter to Questionnaires – Malaysia

Kolej Perniagaan dan Ekonomi

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UNIVERSITY OF CANTERBURY

7 Februari 2009

TANGGAPAN KEADILAN DAN GELAGAT KEPATUHAN PEMBAYAR CUKAI

Para Peserta,

Saya merupakan pensyarah perakaunan di Universiti Utara Malaysia dan sedang melanjutkan pengajian peringkat Doktor Falsafah di Jabatan Perakaunan dan Sistem Maklumat, *University of Canterbury, Christchurch, New Zealand*. Program pengajian ini memerlukan saya menjalankan projek kajian berkaitan pencukaian. Sehubungan itu, saya membuat kajian perbandingan berkaitan tanggapan keadilan dan gelagat kepatuhan pembayar cukai di Malaysia dan New Zealand.

Kejayaan projek ini sebahagian besarnya bergantung kepada penyertaan anda untuk mengisi borang kaji selidik ini. Kaji selidik ini tidak akan mengambil masa anda lebih daripada 30 minit untuk dilengkapkan. Ia mengandungi pernyataan yang memerlukan pandangan anda. Tiada jawapan yang betul atau salah.

Maklum balas dalam borang kaji selidik ini adalah rahsia. Identiti anda tidak akan dikaitkan dengan maklum balas anda. Anda boleh menarik diri daripada mengmabil bahagian di dalam projek kajian ini sehingga borang kaji selidik diposkan kepada penyelidik.

Dengan melengkapkan borang kaji selidik ini, anda dianggap bersetuju untuk mengambil bahagian di dalam projek ini dan juga bersetuju sekiranya hasil kajian ini dicetak secara kolektif dengan memelihara kerahsiaan identiti anda.

Saya juga ingin mempelawa anda untuk mengambil bahagian dalam temu bual yang akan diadakan kemudian pada tahun ini. Walaupun anda tidak dimestikan mengambil bahagian dalam temu bual ini, kerjasama anda untuk berbuat demikian adalah amat dihargai. Anda boleh memberikan persetujuan untuk ditemu bual dengan menulis maklumat berkaitan di dalam borang persetujuan yang dilampirkan. Sekiranya anda bersetuju untuk ditemu bual, saya akan menghubungi anda untuk mengatur masa yang bersesuaian untuk sesi berkenaan. Temu bual ini akan mengambil masa lebih kurang 20 hingga 30 minit.

Sekiranya anda mempunyai sebarang pertanyaan berkaitan projek kajian ini, anda boleh menghubungi penyelia akademik saya melalui e-mel adrian.sawyer@canterbury.ac.nz atau saya sendiri di nombor telefon (04) 575 6784.

Projek kajian ini telah diluluskan oleh Unit Perancang Ekonomi, Jabatan Perdana Menteri Malaysia.

Sekian, terima kasih.

Yang benar,

NATRAH SAAD
Pelajar Phd
University of Canterbury
Christchurch, New Zealand.
Email: nbs24@student.canterbury.ac.nz

DR ADRIAN SAWYER
Profesor Pencukaian
University of Canterbury
Christchurch, New Zealand.
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Appendix 9
Full Results of the Non-response Bias Test – New Zealand

		Levene's Test for Equality of Variances		*t*-test for Equality of Means			
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean difference
GF1	Equal variances assumed	1.498	.225	.381	78	.704	.125
	Equal variances not assumed			.381	77.328	.704	.125
GF2	Equal variances assumed	1.015	.317	.734	77	.465	.247
	Equal variances not assumed			.735	76.879	.465	.247
GF3R	Equal variances assumed	.455	.502	1.536	78	.129	.700
	Equal variances not assumed			1.536	77.878	.129	.700
EF1	Equal variances assumed	.177	.675	2.341	78	.022	.900
	Equal variances not assumed			2.341	77.474	.022	.900
EF2	Equal variances assumed	2.020	.159	-.066	78	.947	-.025
	Equal variances not assumed			-.066	76.730	.947	-.025
EF3R	Equal variances assumed	.060	.807	2.020	76	.047	.718
	Equal variances not assumed			2.020	75.812	.047	.718
HF1	Equal variances assumed	.492	.485	.220	78	.827	.075
	Equal variances not assumed			.220	77.998	.827	.075
HF2	Equal variances assumed	.798	.374	.832	78	.408	.250
	Equal variances not assumed			.832	77.902	.408	.250
HF3	Equal variances assumed	1.072	.304	-.417	77	.678	-.152
	Equal variances not assumed			-.416	74.133	.678	-.152
VF1	Equal variances assumed	1.211	.274	.875	78	.384	.350
	Equal variances not assumed			.875	76.791	.384	.350
VF2	Equal variances assumed	.959	.330	1.403	78	.165	.525
	Equal variances not assumed			1.403	77.661	.165	.525
VF3R	Equal variances assumed	.733	.394	.192	78	.848	.075
	Equal variances not assumed			.192	77.303	.848	.075
RF1R	Equal variances assumed	1.121	.293	-.788	78	.433	-.375
	Equal variances not assumed			-.788	77.116	.433	-.375
RF2	Equal variances assumed	1.032	.313	-.590	78	.557	-.200
	Equal variances not assumed			-.590	74.376	.557	-.200
RF3	Equal variances assumed	2.439	.122	.408	78	.685	.125
	Equal variances not assumed			.408	73.416	.685	.125
PF1	Equal variances assumed	1.105	.296	.624	78	.534	.225
	Equal variances not assumed			.624	76.028	.535	.225
PF2R	Equal variances assumed	.903	.345	1.788	77	.078	.675
	Equal variances not assumed			1.789	76.884	.078	.675
PF3	Equal variances assumed	4.380	.040	-.332	77	.740	-.107
	Equal variances not assumed			-.332	73.175	.741	-.107
AF1	Equal variances assumed	2.944	.090	.747	78	.457	.225
	Equal variances not assumed			.747	74.912	.457	.225
AF2	Equal variances assumed	2.125	.149	-.836	78	.406	-.250
	Equal variances not assumed			-.836	77.602	.406	-.250

Appendix 10
Full Results of the Non-Response Bias Test – Malaysia

		Levene's Test for Equality of Variances		*t*-test for Equality of Means			
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean difference
GF1	Equal variances assumed	1.321	.254	-.779	78	.438	-.275
	Equal variances not assumed			-.779	74.955	.438	-.275
GF2	Equal variances assumed	6.286	.014	-.226	78	.822	-.075
	Equal variances not assumed			-.226	70.400	.822	-.075
GF3R	Equal variances assumed	5.004	.028	.362	77	.718	.137
	Equal variances not assumed			.363	72.625	.718	.137
EF1	Equal variances assumed	5.157	.026	-1.235	78	.220	-.400
	Equal variances not assumed			-1.235	67.760	.221	-.400
EF2	Equal variances assumed	2.487	.119	1.844	74	.069	.553
	Equal variances not assumed			1.844	68.517	.069	.553
EF3R	Equal variances assumed	6.559	.012	-.882	75	.381	-.279
	Equal variances not assumed			-.879	68.713	.383	-.279
HF1	Equal variances assumed	3.014	.087	-.325	77	.746	-.147
	Equal variances not assumed			-.326	75.883	.746	-.147
HF2	Equal variances assumed	5.981	.017	-1.764	75	.082	-.642
	Equal variances not assumed			-1.756	65.823	.084	-.642
HF3	Equal variances assumed	2.056	.156	1.970	78	.052	.700
	Equal variances not assumed			1.970	76.583	.052	.700
VF1	Equal variances assumed	.000	1.000	1.562	78	.122	.450
	Equal variances not assumed			1.562	77.949	.122	.450
VF2	Equal variances assumed	1.115	.294	.600	75	.551	.177
	Equal variances not assumed			.598	69.741	.552	.177
VF3R	Equal variances assumed	25.613	.000	2.058	75	.043	.711
	Equal variances not assumed			2.043	55.060	.046	.711
RF1R	Equal variances assumed	5.855	.018	.572	74	.569	.224
	Equal variances not assumed			.567	63.958	.573	.224
RF2	Equal variances assumed	.016	.899	2.245	75	.028	.534
	Equal variances not assumed			2.245	74.988	.028	.534
RF3	Equal variances assumed	.042	.839	.184	75	.854	.068
	Equal variances not assumed			.184	74.574	.855	.068
PF1	Equal variances assumed	.190	.664	3.140	78	.002	.875
	Equal variances not assumed			3.140	77.898	.002	.875
PF2R	Equal variances assumed	.788	.378	.703	77	.484	.246
	Equal variances not assumed			.701	73.206	.486	.246
PF3	Equal variances assumed	4.462	.038	-.806	75	.423	-.246
	Equal variances not assumed			-.803	65.988	.425	-.246
AF1	Equal variances assumed	.006	.941	.252	74	.802	.079
	Equal variances not assumed			.252	73.928	.802	.079
AF2	Equal variances assumed	.180	.673	1.269	75	.208	.455
	Equal variances not assumed			1.269	74.949	.208	.455

Appendix 11
Full Results of the *t*-test Analysis between Public Sector and Private Sector in Malaysia

		Levene's Test for Equality of Variances		*t*-test for Equality of Means			
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean difference
GF	Equal variances assumed	1.841	.175	2.654	836	.008	.19014
	Equal variances not assumed			2.719	572.322	.007	.19014
EF	Equal variances assumed	.008	.931	6.807	836	.000	.41564
	Equal variances not assumed			6.812	538.767	.000	.41564
HF	Equal variances assumed	5.765	.017	-.111	836	.911	-.01197
	Equal variances not assumed			-.116	597.057	.908	-.01197
VF	Equal variances assumed	.002	.967	3.163	836	.002	.22357
	Equal variances not assumed			3.118	518.481	.002	.22357
RF	Equal variances assumed	.000	.987	1.289	836	.198	.08717
	Equal variances not assumed			1.294	542.457	.196	.08717
PF	Equal variances assumed	1.554	.213	4.511	836	.000	.28477
	Equal variances not assumed			4.576	558.013	.000	.28477
AF	Equal variances assumed	0.190	.663	2.280	836	.023	.17650
	Equal variances not assumed			2.254	522.356	.025	.17650
GK	Equal variances assumed	1.279	.258	1.440	836	.150	.11697
	Equal variances not assumed			1.504	601.497	.133	.11697
LK	Equal variances assumed	1.288	.257	3.100	836	.002	.24511
	Equal variances not assumed			3.138	555.270	.002	.24511
TK	Equal variances assumed	1.813	.179	.072	836	.942	.00475
	Equal variances not assumed			.070	504.340	.944	.00475
CT	Equal variances assumed	.149	.700	-.175	836	.861	-.01466
	Equal variances not assumed			-.178	555.843	.859	-.01466
CM	Equal variances assumed	9.497	.002	.983	836	.326	.08180
	Equal variances not assumed			1.045	631.109	.296	.08180
IND	Equal variances assumed	.039	.844	1.112	836	.266	.10623
	Equal variances not assumed			1.106	530.562	.269	.10623
AFD	Equal variances assumed	6.856	.009	1.879	836	.061	.17605
	Equal variances not assumed			1.931	577.296	.054	.17605
ISD	Equal variances assumed	.080	.777	.159	836	.874	.01421
	Equal variances not assumed			.160	543.582	.873	.01421
SND	Equal variances assumed	.124	.725	.862	836	.389	.06641
	Equal variances not assumed			.850	518.853	.396	.06641
PBD	Equal variances assumed	.289	.591	.631	836	.528	.05105
	Equal variances not assumed			.623	520.300	.534	.05105
INS	Equal variances assumed	.796	.373	3.223	836	.001	.31885
	Equal variances not assumed			3.239	544.940	.001	.31885
AFS	Equal variances assumed	8.232	.004	2.712	836	.007	.27282
	Equal variances not assumed			2.826	598.880	.005	.27282
ISS	Equal variances assumed	6.796	.009	.058	836	.953	.00513

	Equal variances not assumed			.062	616.307	.951	.00513
SNS	Equal variances assumed	.302	.583	1.131	836	.259	.10327
	Equal variances not assumed			1.150	562.267	.251	.10327
PBS	Equal variances assumed	.359	.549	-.090	836	.929	-.00712
	Equal variances not assumed			-.090	545.911	.928	-.00712

Appendix 12

Full Results of the *t*-test Analysis between New Zealand and Malaysia Fairness Perceptions

		Levene's Test for Equality of Variances		*t*-test for Equality of Means			
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean difference
GF	Equal variances assumed	13.557	.000	-8.195	1069	.000	-.623
	Equal variances not assumed			-7.466	304.584	.000	-.623
EF	Equal variances assumed	47.860	.000	-10.993	1069	.000	-.774
	Equal variances not assumed			-9.026	277.078	.000	-.774
HF	Equal variances assumed	14.183	.000	12.826	1069	.000	1.356
	Equal variances not assumed			14.600	410.557	.000	1.356
VF	Equal variances assumed	31.921	.000	-9.882	1069	.000	-.784
	Equal variances not assumed			-8.248	280.825	.000	-.784
RF	Equal variances assumed	5.708	.017	-.391	1069	.696	-.028
	Equal variances not assumed			-.365	312.543	.716	-.028
PF	Equal variances assumed	14.083	.000	-3.171	1069	.002	-.218
	Equal variances not assumed			-2.818	297.146	.005	-.218
AF	Equal variances assumed	.046	.830	-9.433	1069	.000	-.760
	Equal variances not assumed			-9.176	327.433	.000	-.760

Perceptions of Tax Knowledge and Tax Complexity

		Levene's Test for Equality of Variances		*t*-test for Equality of Means			
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean difference
GK	Equal variances assumed	4.272	.039	14.984	1069	.000	1.242
	Equal variances not assumed			15.241	346.277	.000	1.242
LK	Equal variances assumed	10.393	.001	7.992	1069	.000	.633
	Equal variances not assumed			8.818	389.825	.000	.633
TK	Equal variances assumed	.000	.993	3.399	1069	.001	.228
	Equal variances not assumed			3.411	340.247	.001	.228
CT	Equal variances assumed	4.015	.045	-2.493	1069	.013	-.217
	Equal variances not assumed			-2.352	316.099	.019	-.217
CM	Equal variances assumed	1.491	.222	-1.471	1069	.142	-.127
	Equal variances not assumed			-1.415	323.177	.158	-.127

Perceptions of Compliance Behaviour (Scenario 1)

		Levene's Test for Equality of Variances		*t*-test for Equality of Means			
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean difference
IND	Equal variances assumed	1.789	.181	11.674	1069	.000	1.156
	Equal variances not assumed			11.315	326.008	.000	1.156
AFD	Equal variances assumed	10.599	.001	9.635	1069	.000	.948
	Equal variances not assumed			8.984	312.070	.000	.948
ISD	Equal variances assumed	3.006	.083	-4.546	1069	.000	-.417
	Equal variances not assumed			-4.475	332.203	.000	-.417
SND	Equal variances assumed	48.064	.000	8.700	1069	.000	.733
	Equal variances not assumed			7.436	286.620	.000	.733
PBD	Equal variances assumed	20.602	.000	-11.534	1069	.000	-.996
	Equal variances not assumed			-10.341	299.683	.000	-.996

Perceptions of Compliance Behaviour (Scenario 2)

		Levene's Test for Equality of Variances		*t*-test for Equality of Means			
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean difference
INS	Equal variances assumed	50.255	.000	4.337	1069	.000	.471
	Equal variances not assumed			3.718	287.376	.000	.471
AFS	Equal variances assumed	22.342	.000	4.766	1069	.000	.511
	Equal variances not assumed			4.326	303.404	.000	.511
ISS	Equal variances assumed	8.878	.003	-7.005	1069	.000	-.645
	Equal variances not assumed			-6.529	311.928	.000	-.645
SNS	Equal variances assumed	13.675	.000	4.677	1069	.000	.451
	Equal variances not assumed			4.295	307.101	.000	.451
PBS	Equal variances assumed	43.873	.000	-2.668	1069	.008	-.232
	Equal variances not assumed			-2.269	285.437	.024	-.232

Appendix 13

Full Results of the PLS Structural Models

Scenario 1: New Zealand

```
P   L   S   G R A P H for Partial Least Squares Analysis
            (2004 Feb 27)

    YEAR-MONTH-DAY: 2009-12-29
     HOUR:MIN:SECS: 14:52:16.

====================================
--      P    L    S    X          --
-- LATENT VARIABLES PATH ANALYSIS --
- PARTIAL LEAST-SQUARES ESTIMATION -
====================================
Number of Blocks       NBLOCS =    8
Number of Cases        NCASES =  219
Number of Dimensions     NDIM =    1
Output Quantity           OUT = 2254
Inner Weighting Scheme  IWGHT =    1
Number of Iterations    NITER =  100
Estimation Accuracy       EPS =    5
Analysed Data Metric   METRIC =    1
====================================
 Block   N-MV Deflate LV-Mode   Model
 ------------------------------------
 IND        3   yes   outward Endogen
 AFD        3   yes   outward Endogen
 ISD        2   yes   outward Endogen
 SND        3   yes   outward  Exogen
 PBD        4   yes   outward Endogen
 Fairness   7   yes    inward Endogen
 knowledg   3   yes    inward  Exogen
 complexi   2   yes    inward  Exogen
 ------------------------------------
          27          Mode A
 ====================================

Real words needed   10821 from 600000
Char words needed     509 from  40000
Dimension No.  1
Partial Least-Squares Parameter Estimation
Change of Stop Criteria during Iteration
Cycle No.     CR1         CR2         CR3         CR4         CR5

    1  0.1167E+01  0.8399E-01  0.2700E+00  0.2062E+00  0.4827E+00
    2  0.6155E-01  0.1727E-01  0.4707E-03  0.7240E-03 -0.1143E-02
    3  0.8600E-01 -0.2543E-03  0.8450E-03 -0.8907E-03 -0.4116E-03
    4  0.3904E-01  0.1347E-02 -0.3084E-03 -0.1189E-02  0.6462E-03
    5  0.3525E-01  0.2988E-03 -0.2648E-04 -0.8408E-03  0.1341E-03
    6  0.1705E-01  0.3627E-03 -0.1634E-03 -0.7080E-03  0.3110E-03
    7  0.1544E-01  0.1648E-03 -0.8425E-04 -0.4939E-03  0.1462E-03
    8  0.9222E-02  0.1250E-03 -0.8442E-04 -0.3683E-03  0.1464E-03
    9  0.7016E-02  0.7210E-04 -0.5385E-04 -0.2542E-03  0.8786E-04
   10  0.4555E-02  0.4922E-04 -0.4157E-04 -0.1794E-03  0.6864E-04
   11  0.3220E-02  0.3112E-04 -0.2781E-04 -0.1227E-03  0.4472E-04
   12  0.2150E-02  0.2089E-04 -0.1978E-04 -0.8458E-04  0.3196E-04
   13  0.1480E-02  0.1372E-04 -0.1338E-04 -0.5757E-04  0.2139E-04
   14  0.9972E-03  0.9220E-05 -0.9235E-05 -0.3927E-04  0.1478E-04
   15  0.6792E-03  0.6160E-05 -0.6258E-05 -0.2665E-04  0.9975E-05
   16  0.4592E-03  0.4151E-05 -0.4269E-05 -0.1810E-04  0.6807E-05
   17  0.3115E-03  0.2793E-05 -0.2893E-05 -0.1227E-04  0.4604E-05
   18  0.2108E-03  0.1886E-05 -0.1964E-05 -0.8314E-05  0.3127E-05
   19  0.1428E-03  0.1273E-05 -0.1330E-05 -0.5631E-05  0.2116E-05
   20  0.9663E-04  0.8609E-06 -0.9016E-06 -0.3813E-05  0.1434E-05
   21  0.6543E-04  0.5820E-06 -0.6104E-06 -0.2582E-05  0.9707E-06
   22  0.4428E-04  0.3937E-06 -0.4134E-06 -0.1748E-05  0.6573E-06
   23  0.2997E-04  0.2663E-06 -0.2798E-06 -0.1183E-05  0.4449E-06
   24  0.2029E-04  0.1802E-06 -0.1894E-06 -0.8008E-06  0.3012E-06
   25  0.1373E-04  0.1219E-06 -0.1282E-06 -0.5420E-06  0.2038E-06
   26  0.9292E-05  0.8250E-07 -0.8679E-07 -0.3668E-06  0.1380E-06
Convergence at Iteration Cycle No.  26
```

OB .. Path coefficients

	IND	AFD	ISD	SND	PBD	Fairness	knowledg	complexi
IND	0.000	0.560	-0.032	0.192	-0.059	-0.004	0.000	0.000
AFD	0.000	0.000	0.000	0.000	0.000	0.059	0.000	0.000
ISD	0.000	0.000	0.000	0.000	0.000	-0.216	0.000	0.000
SND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PBD	0.000	0.000	0.000	0.000	0.000	0.000	0.062	0.010
Fairness	0.000	0.000	0.000	0.000	0.000	0.000	0.324	0.346
knowledg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
complexi	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

OR .. Correlations of latent variables

	IND	AFD	ISD	SND	PBD	Fairness	knowledg	complexi
IND	1.000							
AFD	0.677	1.000						
ISD	0.084	0.128	1.000					
SND	0.488	0.502	0.162	1.000				
PBD	-0.357	-0.427	-0.215	-0.343	1.000			
Fairness	0.035	0.059	-0.216	0.020	0.067	1.000		
knowledg	0.144	0.007	-0.192	0.150	0.065	0.413	1.000	
complexi	0.009	0.081	0.011	0.078	0.027	0.430	0.258	1.000

Inner Model

Block	Mean	Location	Mult.RSq	AvResVar	AvCommun	AvRedund
IND	0.0000	0.0000	0.4908	0.3059	0.6941	0.3407
AFD	0.0000	0.0000	0.0034	0.2600	0.7400	0.0025
ISD	0.0000	0.0000	0.0467	0.4595	0.5405	0.0252
SND	0.0000	0.0000	0.0000	0.2981	0.7019	0.0000
PBD	0.0000	0.0000	0.0043	0.4101	0.5899	0.0026
Fairness	0.0000	0.0000	0.2829	0.7869	0.2131	0.0603
knowledg	0.0000	0.0000	0.0000	0.5973	0.4027	0.0000
complexi	0.0000	0.0000	0.0000	0.4096	0.5904	0.0000
Average			0.1035	0.4915	0.5085	0.0560

Outer Model

Variable	Weight	Loading	Location	ResidVar	Communal	Redundan
IND	outward					
IND1R	0.3717	0.8360	0.0000	0.3011	0.6989	0.3430
IND2	0.3739	0.7909	0.0000	0.3744	0.6256	0.3071
IND3	0.4520	0.8705	0.0000	0.2422	0.7578	0.3720
AFD	outward					
ATD1	0.3779	0.8887	0.0000	0.2103	0.7897	0.0027
ATD2	0.3956	0.9104	0.0000	0.1711	0.8289	0.0028
ATD5R	0.3920	0.7755	0.0000	0.3986	0.6014	0.0021
ISD	outward					
ATD3R	0.8940	0.9332	0.0000	0.1291	0.8709	0.0407
ATD4R	0.3615	0.4585	0.0000	0.7898	0.2102	0.0098
SND	outward					
SND1R	0.3610	0.8205	0.0000	0.3268	0.6732	0.0000
SND2	0.3994	0.8122	0.0000	0.3403	0.6597	0.0000
SND3R	0.4316	0.8790	0.0000	0.2273	0.7727	0.0000
PBD	outward					

PBD1	0.1923	0.6837	0.0000	0.5326	0.4674	0.0020
PBD3	0.3963	0.8464	0.0000	0.2835	0.7165	0.0031
PBD4	0.2712	0.7726	0.0000	0.4030	0.5970	0.0026
PBD5	0.4254	0.7608	0.0000	0.4212	0.5788	0.0025
Fairness	inward					
GF	0.5772	0.6638	0.0000	0.5593	0.4407	0.1247
EF	0.1558	0.6040	0.0000	0.6352	0.3648	0.1032
HF	0.2841	0.3035	0.0000	0.9079	0.0921	0.0261
VF	0.0828	0.3880	0.0000	0.8495	0.1505	0.0426
RF	0.2234	0.2440	0.0000	0.9405	0.0595	0.0168
PF	-0.1108	0.0763	0.0000	0.9942	0.0058	0.0016
AF	0.5827	0.6150	0.0000	0.6218	0.3782	0.1070
knowledg	inward					
GK	0.7225	0.8237	0.0000	0.3215	0.6785	0.0000
LK	0.3586	0.5806	0.0000	0.6629	0.3371	0.0000
TK	0.4482	0.4388	0.0000	0.8074	0.1926	0.0000
complexi	inward					
CT	1.0838	0.9907	0.0000	0.0186	0.9814	0.0000
CM	-0.1650	0.4465	0.0000	0.8006	0.1994	0.0000

Output results with Construct Level sign change preprocessing:

Bootstrap raw data generated for Dr. Annette Mills

Number of cases in full model: 219

Number of cases per sample: 219

Number of samples generated: 200

Number of good samples: 188

The following samples were not included in the calculations due to error detection:
28,50,56,75,78,101,106,119,160,165,179,183

Outer Model Weights:

	Original sample estimate	Mean of subsamples	Standard error	T-Statistic
IND :				
IND1R	0.3717	0.3714	0.0301	12.3496
IND2	0.3739	0.3719	0.0346	10.8196
IND3	0.4520	0.4535	0.0332	13.6100
AFD :				
ATD1	0.3779	0.3793	0.0192	19.6316
ATD2	0.3956	0.3892	0.0212	18.6491
ATD5R	0.3920	0.3923	0.0362	10.8372
ISD :				
ATD3R	0.8940	0.7763	0.2467	3.6244
ATD4R	0.3615	0.3837	0.3645	0.9918
SND :				
SND1R	0.3610	0.3633	0.0347	10.3910
SND2	0.3994	0.3940	0.0379	10.5367
SND3R	0.4316	0.4323	0.0339	12.7279
PBD :				
PBD1	0.1923	0.2103	0.0788	2.4417
PBD3	0.3963	0.3919	0.0480	8.2503
PBD4	0.2712	0.2653	0.0585	4.6398
PBD5	0.4254	0.4102	0.1015	4.1923

Fairness:				
GF	0.5772	0.5156	0.1637	3.0130
EF	0.1558	0.0989	0.2285	0.6569
HF	0.2841	0.2379	0.1153	2.1423
VF	0.0828	0.0994	0.1702	0.5163
RF	0.2234	0.2588	0.2907	0.7856
PF	-0.1108	-0.1399	0.1780	0.5904
AF	0.5827	0.4872	0.1795	3.0929
knowledg:				
GK	0.7225	0.6232	0.1913	3.5736
LK	0.3586	0.3232	0.1924	1.9273
TK	0.4482	0.4912	0.2983	1.6350
complexi:				
CT	1.0838	1.0299	0.2162	4.4951
CM	-0.1650	-0.1481	0.3243	0.4999

Outer Model Loadings:

	Original sample estimate	Mean of subsamples	Standard error	T-Statistic
IND :				
(Composite Reliability =	0.872 , AVE =	0.694)		
IND1R	0.8360	0.8334	0.0407	20.5561
IND2	0.7909	0.7875	0.0444	17.8259
IND3	0.8705	0.8734	0.0280	31.1239
AFD :				
(Composite Reliability =	0.895 , AVE =	0.740)		
ATD1	0.8887	0.8935	0.0195	45.6289
ATD2	0.9104	0.9114	0.0187	48.6453
ATD5R	0.7755	0.7791	0.0375	20.6808
ISD :				
(Composite Reliability =	0.678 , AVE =	0.541)		
ATD3R	0.9332	0.8234	0.2186	4.2683
ATD4R	0.4585	0.4598	0.3677	1.2469
SND :				
(Composite Reliability =	0.876 , AVE =	0.702)		
SND1R	0.8205	0.8219	0.0387	21.2189
SND2	0.8122	0.8076	0.0425	19.0956
SND3R	0.8790	0.8823	0.0191	45.9740
PBD :				
(Composite Reliability =	0.851 , AVE =	0.590)		
PBD1	0.6837	0.6922	0.0925	7.3886
PBD3	0.8464	0.8389	0.0412	20.5416
PBD4	0.7726	0.7668	0.0728	10.6069
PBD5	0.7608	0.7426	0.0776	9.8025
Fairness:				
(Composite Reliability =	0.603 , AVE =	0.213)		
GF	0.6638	0.5882	0.1357	4.8935
EF	0.6040	0.5008	0.1785	3.3833
HF	0.3035	0.2661	0.1531	1.9820
VF	0.3880	0.3610	0.1424	2.7239
RF	0.2440	0.2739	0.2965	0.8228
PF	0.0763	0.0264	0.1840	0.4146
AF	0.6150	0.5067	0.2324	2.6468
knowledg:				
(Composite Reliability =	0.655 , AVE =	0.403)		
GK	0.8237	0.7155	0.1775	4.6410
LK	0.5806	0.5162	0.1832	3.1691
TK	0.4388	0.4809	0.3025	1.4504

complexi:
(Composite Reliability = 0.716 , AVE = 0.590)

CT	0.9907	0.9483	0.1084	9.1393
CM	0.4465	0.4290	0.2463	1.8129

Path Coefficients Table (Original Sample Estimate):

	IND	AFD	ISD	SND	PBD	Fairness	knowledg	complexi
IND	0.0000	0.5600	-0.0320	0.1920	-0.0590	-0.0040	0.0000	0.0000
AFD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0590	0.0000	0.0000
ISD	0.0000	0.0000	0.0000	0.0000	0.0000	-0.2160	0.0000	0.0000
SND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0620	0.0100
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3240	0.3460
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (Mean of Subsamples):

	IND	AFD	ISD	SND	PBD	Fairness	knowledg	complexi
IND	0.0000	0.5596	-0.0251	0.1891	-0.0543	0.0176	0.0000	0.0000
AFD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0516	0.0000	0.0000
ISD	0.0000	0.0000	0.0000	0.0000	0.0000	-0.2394	0.0000	0.0000
SND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0776	0.0052
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3619	0.3057
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (Standard Error):

	IND	AFD	ISD	SND	PBD	Fairness	knowledg	complexi
IND	0.0000	0.0707	0.0624	0.0725	0.0580	0.0900	0.0000	0.0000
AFD	0.0000	0.0000	0.0000	0.0000	0.0000	0.1302	0.0000	0.0000
ISD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0986	0.0000	0.0000
SND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0960	0.0984
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0822	0.1408
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (T-Statistic)

	IND	AFD	ISD	SND	PBD	Fairness	knowledg	complexi
IND	0.0000	7.9175	0.5129	2.6477	1.0167	0.0444	0.0000	0.0000
AFD	0.0000	0.0000	0.0000	0.0000	0.0000	0.4530	0.0000	0.0000
ISD	0.0000	0.0000	0.0000	0.0000	0.0000	2.1903	0.0000	0.0000
SND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6461	0.1016
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.9428	2.4574
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Scenario 1: Malaysia

```
P   L   S   G R A P H for Partial Least Squares Analysis
            (2004 Feb 27)

     YEAR-MONTH-DAY: 2010-05-25
      HOUR:MIN:SECS: 15:06:17.

====================================
--      P    L    S    X          --
-- LATENT VARIABLES PATH ANALYSIS --
- PARTIAL LEAST-SQUARES ESTIMATION -
====================================
Number of Blocks        NBLOCS =    8
Number of Cases         NCASES =  852
Number of Dimensions      NDIM =    1
Output Quantity            OUT = 2257
Inner Weighting Scheme   IWGHT =    1
Number of Iterations     NITER =  100
Estimation Accuracy        EPS =    5
Analysed Data Metric    METRIC =    1
====================================
 Block    N-MV Deflate LV-Mode   Model
 ------------------------------------
 IND         3   yes   outward Endogen
 AFD         3   yes   outward Endogen
 ISD         2   yes   outward Endogen
 SND         3   yes   outward  Exogen
 PBD         4   yes   outward Endogen
 Fairness    7   yes    inward Endogen
 Knowledg    3   yes    inward  Exogen
 complexi    2   yes    inward  Exogen
 ------------------------------------
           27          Mode A
 ====================================

Real words needed   38673 from 600000
Char words needed    1775 from  40000
Dimension No.  1

Partial Least-Squares Parameter Estimation
Change of Stop Criteria during Iteration
Cycle No.     CR1          CR2          CR3          CR4          CR5

    1  0.1087E+01  0.1071E+00  0.3189E+00  0.2645E+00  0.4821E+00
    2  0.9084E-01  0.1473E-01  0.4898E-03  0.1530E-02  0.2299E-03
    3  0.1240E-01 -0.1914E-03 -0.3770E-03 -0.1093E-03 -0.1008E-03
    4  0.4586E-02  0.7479E-04 -0.3000E-04  0.6947E-04  0.2349E-04
    5  0.2317E-02 -0.8709E-05 -0.1493E-04  0.1582E-04  0.4898E-06
    6  0.8169E-03 -0.2820E-04 -0.2090E-05  0.9698E-05  0.2754E-05
    7  0.3976E-03 -0.9244E-05 -0.1894E-05  0.3318E-05  0.5728E-06
    8  0.1470E-03 -0.4826E-05 -0.3986E-06  0.1599E-05  0.3902E-06
    9  0.6853E-04 -0.1867E-05 -0.2816E-06  0.6078E-06  0.1216E-06
   10  0.2630E-04 -0.8402E-06 -0.7878E-07  0.2740E-06  0.6231E-07
   11  0.1188E-04 -0.3371E-06 -0.4539E-07  0.1088E-06  0.2264E-07
   12  0.4683E-05 -0.1469E-06 -0.1475E-07  0.4760E-07  0.1051E-07
Convergence at Iteration Cycle No.  12


OB  .. Path coefficients
 ================================================================================
           IND     AFD     ISD     SND     PBD     Fairness  Knowledg  complexi
 IND       0.000   0.458  -0.037   0.388   0.036     0.018     0.000     0.000
 AFD       0.000   0.000   0.000   0.000   0.000     0.230     0.000     0.000
 ISD       0.000   0.000   0.000   0.000   0.000     0.004     0.000     0.000
 SND       0.000   0.000   0.000   0.000   0.000     0.000     0.000     0.000
 PBD       0.000   0.000   0.000   0.000   0.000     0.000     0.163     0.066
 Fairness  0.000   0.000   0.000   0.000   0.000     0.000     0.486     0.199
 Knowledg  0.000   0.000   0.000   0.000   0.000     0.000     0.000     0.000
 complexi  0.000   0.000   0.000   0.000   0.000     0.000     0.000     0.000
 ================================================================================
```

OR .. Correlations of latent variables

	IND	AFD	ISD	SND	PBD	Fairness	Knowledg	complexi
IND	1.000							
AFD	0.654	1.000						
ISD	0.185	0.235	1.000					
SND	0.615	0.546	0.342	1.000				
PBD	-0.236	-0.309	-0.498	-0.389	1.000			
Fairness	0.210	0.230	0.004	0.215	0.093	1.000		
Knowledg	0.144	0.188	-0.057	0.125	0.189	0.567	1.000	
complexi	0.170	0.117	-0.061	0.134	0.132	0.396	0.406	1.000

Inner Model

Block	Mean	Location	Mult.RSq	AvResVar	AvCommun	AvRedund
IND	0.0000	0.0000	0.5265	0.3821	0.6179	0.3253
AFD	0.0000	0.0000	0.0528	0.3681	0.6319	0.0334
ISD	0.0000	0.0000	0.0000	0.3604	0.6396	0.0000
SND	0.0000	0.0000	0.0000	0.4410	0.5590	0.0000
PBD	0.0000	0.0000	0.0396	0.3418	0.6582	0.0260
Fairness	0.0000	0.0000	0.3543	0.7081	0.2919	0.1034
Knowledg	0.0000	0.0000	0.0000	0.4340	0.5660	0.0000
complexi	0.0000	0.0000	0.0000	0.3166	0.6834	0.0000
Average			0.1217	0.4649	0.5351	0.0705

Outer Model

Variable	Weight	Loading	Location	ResidVar	Communal	Redundan
IND	outward					
IND1R	0.3530	0.7108	0.0000	0.4947	0.5053	0.2660
IND2	0.4543	0.8532	0.0000	0.2721	0.7279	0.3832
IND3	0.4589	0.7878	0.0000	0.3794	0.6206	0.3268
AFD	outward					
ATD1	0.4240	0.8599	0.0000	0.2606	0.7394	0.0391
ATD2	0.4896	0.8897	0.0000	0.2084	0.7916	0.0418
ATD5R	0.3308	0.6040	0.0000	0.6352	0.3648	0.0193
ISD	outward					
ATD3R	0.4661	0.6908	0.0000	0.5228	0.4772	0.0000
ATD4R	0.7571	0.8955	0.0000	0.1981	0.8019	0.0000
SND	outward					
SND1R	0.3677	0.7138	0.0000	0.4904	0.5096	0.0000
SND2	0.5276	0.7582	0.0000	0.4252	0.5748	0.0000
SND3R	0.4384	0.7699	0.0000	0.4072	0.5928	0.0000
PBD	outward					
PBD1	0.2966	0.7764	0.0000	0.3972	0.6028	0.0239
PBD3	0.2456	0.7558	0.0000	0.4288	0.5712	0.0226
PBD4	0.3408	0.8815	0.0000	0.2229	0.7771	0.0307
PBD5	0.3436	0.8257	0.0000	0.3183	0.6817	0.0270
Fairness	inward					
GF	0.0702	0.3893	0.0000	0.8485	0.1515	0.0537
EF	0.0107	0.4611	0.0000	0.7874	0.2126	0.0753
HF	-0.1878	0.0023	0.0000	1.0000	0.0000	0.0000
VF	0.3065	0.5796	0.0000	0.6640	0.3360	0.1190
RF	0.4643	0.6923	0.0000	0.5207	0.4793	0.1698
PF	0.4309	0.7614	0.0000	0.4203	0.5797	0.2054
AF	0.2645	0.5331	0.0000	0.7158	0.2842	0.1007

Knowledg	inward					
GK		0.5466	0.8383	0.0000	0.2972	0.7028	0.0000
LK		0.3543	0.7013	0.0000	0.5081	0.4919	0.0000
TK		0.4134	0.7094	0.0000	0.4967	0.5033	0.0000
complexi	inward					
CT		0.7981	0.9458	0.0000	0.1054	0.8946	0.0000
CM		0.3567	0.6873	0.0000	0.5277	0.4723	0.0000

Output results with Construct Level sign change preprocessing:

Bootstrap raw data generated for Dr. Annette Mills

Number of cases in full model: 852

Number of cases per sample: 852

Number of samples generated: 200

Number of good samples: 199

The following samples were not included in the calculations due to error detection:
71

Outer Model Weights:

	Original sample estimate	Mean of subsamples	Standard error	T-Statistic
IND :				
IND1R	0.3530	0.3540	0.0237	14.8965
IND2	0.4543	0.4526	0.0161	28.2445
IND3	0.4589	0.4598	0.0216	21.2585
AFD :				
ATD1	0.4240	0.4266	0.0164	25.8939
ATD2	0.4896	0.4918	0.0201	24.3244
ATD5R	0.3308	0.3274	0.0282	11.7216
ISD :				
ATD3R	0.4661	0.4507	0.1692	2.7541
ATD4R	0.7571	0.7541	0.1322	5.7269
SND :				
SND1R	0.3677	0.3660	0.0288	12.7723
SND2	0.5276	0.5304	0.0334	15.8095
SND3R	0.4384	0.4378	0.0251	17.4967
PBD :				
PBD1	0.2966	0.2961	0.0374	7.9267
PBD3	0.2456	0.2466	0.0379	6.4780
PBD4	0.3408	0.3408	0.0236	14.4412
PBD5	0.3436	0.3410	0.0272	12.6446
Fairness:				
GF	0.0702	0.0648	0.0651	1.0163
EF	0.0107	0.0060	0.0558	0.1667
HF	-0.1878	-0.1787	0.0650	2.5596
VF	0.3065	0.3057	0.0608	4.4674
RF	0.4643	0.4515	0.0685	6.7152
PF	0.4309	0.4278	0.0715	5.6310
AF	0.2645	0.2694	0.0636	3.8068
Knowledg:				
GK	0.5466	0.5485	0.0665	9.1649
LK	0.3543	0.3464	0.0591	6.1036
TK	0.4134	0.4142	0.0621	6.7023

```
complexi:
    CT              0.7981      0.7904      0.0688     10.5892
    CM              0.3567      0.3610      0.0932      3.5098
=========================================================================


Outer Model Loadings:
=========================================================================
                  Original    Mean of     Standard    T-Statistic
                  sample      subsamples  error
                  estimate
IND     :
(Composite Reliability =      0.828 , AVE =      0.618 )
    IND1R           0.7108      0.7115      0.0329     21.6097
    IND2            0.8532      0.8518      0.0148     57.4596
    IND3            0.7878      0.7866      0.0236     33.4147

AFD     :
(Composite Reliability =      0.834 , AVE =      0.632 )
    ATD1            0.8599      0.8597      0.0193     44.5174
    ATD2            0.8897      0.8896      0.0116     76.7475
    ATD5R           0.6040      0.5943      0.0432     13.9693

ISD     :
(Composite Reliability =      0.777 , AVE =      0.640 )
    ATD3R           0.6908      0.6641      0.1427      4.8395
    ATD4R           0.8955      0.8836      0.0856     10.4668

SND     :
(Composite Reliability =      0.792 , AVE =      0.559 )
    SND1R           0.7138      0.7107      0.0374     19.0681
    SND2            0.7582      0.7608      0.0240     31.5384
    SND3R           0.7699      0.7644      0.0277     27.7568

PBD     :
(Composite Reliability =      0.885 , AVE =      0.658 )
    PBD1            0.7764      0.7778      0.0315     24.6094
    PBD3            0.7558      0.7542      0.0373     20.2544
    PBD4            0.8815      0.8806      0.0142     61.9549
    PBD5            0.8257      0.8251      0.0245     33.6916

Fairness:
(Composite Reliability =      0.702 , AVE =      0.292 )
    GF              0.3893      0.3852      0.0695      5.6054
    EF              0.4611      0.4495      0.0467      9.8808
    HF              0.0023      0.0078      0.0777      0.0296
    VF              0.5796      0.5776      0.0549     10.5532
    RF              0.6923      0.6826      0.0531     13.0494
    PF              0.7614      0.7561      0.0448     16.9909
    AF              0.5331      0.5346      0.0601      8.8658

Knowledg:
(Composite Reliability =      0.795 , AVE =      0.566 )
    GK              0.8383      0.8375      0.0368     22.7940
    LK              0.7013      0.6912      0.0467     15.0047
    TK              0.7094      0.7095      0.0517     13.7164

complexi:
(Composite Reliability =      0.808 , AVE =      0.683 )
    CT              0.9458      0.9402      0.0312     30.3220
    CM              0.6873      0.6895      0.0682     10.0777
=========================================================================
```

Path Coefficients Table (Original Sample Estimate):

	IND	AFD	ISD	SND	PBD	Fairness	Knowledg	complexi
IND	0.0000	0.4580	-0.0370	0.3880	0.0360	0.0180	0.0000	0.0000
AFD	0.0000	0.0000	0.0000	0.0000	0.0000	0.2300	0.0000	0.0000
ISD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0040	0.0000	0.0000
SND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1630	0.0660
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4860	0.1990
Knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (Mean of Subsamples):

	IND	AFD	ISD	SND	PBD	Fairness	Knowledg	complexi
IND	0.0000	0.4558	-0.0331	0.3840	0.0277	0.0169	0.0000	0.0000
AFD	0.0000	0.0000	0.0000	0.0000	0.0000	0.2387	0.0000	0.0000
ISD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0073	0.0000	0.0000
SND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1642	0.0721
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4884	0.2111
Knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (Standard Error):

	IND	AFD	ISD	SND	PBD	Fairness	Knowledg	complexi
IND	0.0000	0.0423	0.0330	0.0399	0.0335	0.0296	0.0000	0.0000
AFD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0375	0.0000	0.0000
ISD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0440	0.0000	0.0000
SND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0390	0.0520
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0314	0.0396
Knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (T-Statistic)

	IND	AFD	ISD	SND	PBD	Fairness	Knowledg	complexi
IND	0.0000	10.1282	1.0879	9.4185	1.0977	0.6550	0.0000	0.0000
AFD	0.0000	0.0000	0.0000	0.0000	0.0000	5.9373	0.0000	0.0000
ISD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0992	0.0000	0.0000
SND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBD	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.8386	1.3975
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	16.3739	5.5921
Knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Scenario 2: New Zealand

```
P   L   S   G R A P H for Partial Least Squares Analysis
            (2004 Feb 27)

     YEAR-MONTH-DAY: 2009-12-29
      HOUR:MIN:SECS: 15:04:51.

====================================
--      P    L    S    X          --
-- LATENT VARIABLES PATH ANALYSIS --
- PARTIAL LEAST-SQUARES ESTIMATION -
====================================
Number of Blocks        NBLOCS =    8
Number of Cases         NCASES =  219
Number of Dimensions      NDIM =    1
Output Quantity            OUT = 2254
Inner Weighting Scheme   IWGHT =    1
Number of Iterations     NITER =  100
Estimation Accuracy        EPS =    5
Analysed Data Metric    METRIC =    1
====================================
 Block    N-MV Deflate LV-Mode   Model
 ------------------------------------
 INS         3   yes   outward Endogen
 AFS         3   yes   outward Endogen
 ISS         2   yes   outward Endogen
 SNS         3   yes   outward  Exogen
 PBS         4   yes   outward Endogen
 Fairness    7   yes    inward Endogen
 knowledg    3   yes    inward  Exogen
 complexi    2   yes    inward  Exogen
 ------------------------------------
            27          Mode A
 ====================================

Real words needed   10821 from 600000
Char words needed     509 from  40000

Dimension No.  1
Partial Least-Squares Parameter Estimation
Change of Stop Criteria during Iteration
Cycle No.     CR1          CR2          CR3          CR4          CR5

    1  0.1135E+01  0.1174E+00  0.3539E+00  0.2710E+00  0.4690E+00
    2  0.1542E+00  0.1619E-01  0.1736E-02  0.2955E-02  0.1746E-04
    3  0.7017E-01  0.2072E-02  0.4503E-03  0.1179E-02 -0.1967E-05
    4  0.2543E-01  0.3426E-03  0.7607E-04  0.3368E-03 -0.3556E-05
    5  0.1056E-01  0.1992E-04  0.1878E-04  0.1544E-03 -0.4289E-05
    6  0.4045E-02 -0.3387E-05  0.6205E-05  0.5684E-04 -0.9785E-06
    7  0.1717E-02 -0.2708E-05  0.1776E-05  0.2616E-04 -0.6036E-06
    8  0.6875E-03 -0.1750E-05  0.8203E-06  0.1025E-04 -0.1534E-06
    9  0.2955E-03 -0.6134E-06  0.2696E-06  0.4619E-05 -0.8752E-07
   10  0.1213E-03 -0.3241E-06  0.1319E-06  0.1860E-05 -0.2484E-07
   11  0.5229E-04 -0.1157E-06  0.4744E-07  0.8244E-06 -0.1352E-07
   12  0.2177E-04 -0.5727E-07  0.2272E-07  0.3377E-06 -0.4243E-08
   13  0.9367E-05 -0.2152E-07  0.8637E-08  0.1480E-06 -0.2194E-08
Convergence at Iteration Cycle No.  13

OB  .. Path coefficients
 ================================================================================
          INS     AFS     ISS     SNS     PBS     Fairness  knowledg  complexi
 --------------------------------------------------------------------------------
 INS      0.000   0.468   0.052   0.345  -0.159     0.071     0.000     0.000
 AFS      0.000   0.000   0.000   0.000   0.000     0.063     0.000     0.000
 ISS      0.000   0.000   0.000   0.000   0.000    -0.074     0.000     0.000
 SNS      0.000   0.000   0.000   0.000   0.000     0.000     0.000     0.000
 PBS      0.000   0.000   0.000   0.000   0.000     0.000     0.041    -0.029
 Fairness0.000   0.000   0.000   0.000   0.000     0.000     0.346     0.420
 knowledg0.000   0.000   0.000   0.000   0.000     0.000     0.000     0.000
 complexi0.000   0.000   0.000   0.000   0.000     0.000     0.000     0.000
 ================================================================================
```

OR .. Correlations of latent variables

	INS	AFS	ISS	SNS	PBS	Fairness	knowledg	complexi
INS	1.000							
AFS	0.789	1.000						
ISS	0.408	0.367	1.000					
SNS	0.736	0.643	0.337	1.000				
PBS	-0.545	-0.480	-0.464	-0.407	1.000			
Fairness	0.134	0.063	-0.074	0.123	0.037	1.000		
knowledg	0.052	-0.006	-0.151	0.025	0.037	0.403	1.000	
complexi	0.263	0.188	0.109	0.250	-0.024	0.467	0.137	1.000

Inner Model

Block	Mean	Location	Mult.RSq	AvResVar	AvCommun	AvRedund
INS	0.0000	0.0000	0.7402	0.2402	0.7598	0.5624
AFS	0.0000	0.0000	0.0040	0.2898	0.7102	0.0028
ISS	0.0000	0.0000	0.0055	0.4093	0.5907	0.0032
SNS	0.0000	0.0000	0.0000	0.2533	0.7467	0.0000
PBS	0.0000	0.0000	0.0023	0.3201	0.6799	0.0015
Fairness	0.0000	0.0000	0.3359	0.7369	0.2631	0.0884
knowledg	0.0000	0.0000	0.0000	0.5760	0.4240	0.0000
complexi	0.0000	0.0000	0.0000	0.4070	0.5930	0.0000
Average			0.1360	0.4500	0.5500	0.0862

Outer Model

Variable	Weight	Loading	Location	ResidVar	Communal	Redundan
INS	outward					
INS1	0.4218	0.9340	0.0000	0.1276	0.8724	0.6457
INS2	0.3519	0.8289	0.0000	0.3129	0.6871	0.5085
INS3R	0.3704	0.8485	0.0000	0.2800	0.7200	0.5329
AFS	outward					
ATS1	0.3594	0.8543	0.0000	0.2701	0.7299	0.0029
ATS2	0.4163	0.8952	0.0000	0.1986	0.8014	0.0032
ATS5R	0.4137	0.7741	0.0000	0.4007	0.5993	0.0024
ISS	outward					
ATS3	0.6942	0.8045	0.0000	0.3527	0.6473	0.0036
ATS4R	0.6041	0.7308	0.0000	0.4659	0.5341	0.0029
SNS	outward					
SNS1R	0.3153	0.7951	0.0000	0.3678	0.6322	0.0000
SNS2	0.4625	0.9073	0.0000	0.1767	0.8233	0.0000
SNS3R	0.3722	0.8857	0.0000	0.2155	0.7845	0.0000
PBS	outward					
PBS2	0.2318	0.8061	0.0000	0.3501	0.6499	0.0015
PBS3	0.3312	0.8431	0.0000	0.2892	0.7108	0.0016
PBS4	0.2942	0.8722	0.0000	0.2392	0.7608	0.0017
PBS5	0.3586	0.7733	0.0000	0.4021	0.5979	0.0013
Fairness	inward					
GF	0.4216	0.6028	0.0000	0.6367	0.3633	0.1220
EF	0.2967	0.6924	0.0000	0.5206	0.4794	0.1610
HF	0.2764	0.2875	0.0000	0.9174	0.0826	0.0278
VF	0.0095	0.3611	0.0000	0.8696	0.1304	0.0438
RF	0.2017	0.5399	0.0000	0.7086	0.2914	0.0979
PF	0.0225	0.2117	0.0000	0.9552	0.0448	0.0151
AF	0.5130	0.6703	0.0000	0.5506	0.4494	0.1509

knowledg	inward					
GK		0.7904	0.9094	0.0000	0.1731	0.8269	0.0000
LK		0.4378	0.6576	0.0000	0.5676	0.4324	0.0000
TK		-0.0592	0.1128	0.0000	0.9873	0.0127	0.0000
complexi	inward					
CT		1.0832	0.9910	0.0000	0.0179	0.9821	0.0000
CM		-0.1626	0.4516	0.0000	0.7960	0.2040	0.0000

Output results with Construct Level sign change preprocessing:

Bootstrap raw data generated for Dr. Annette Mills

Number of cases in full model: 219

Number of cases per sample: 219

Number of samples generated: 200

Number of good samples: 200

Outer Model Weights:

	Original sample	Mean of subsamples estimate	Standard error	T-Statistic
INS :				
INS1	0.4218	0.4204	0.0196	21.5647
INS2	0.3519	0.3512	0.0192	18.3094
INS3R	0.3704	0.3705	0.0171	21.6543
AFS :				
ATS1	0.3594	0.3592	0.0225	15.9784
ATS2	0.4163	0.4180	0.0236	17.6437
ATS5R	0.4137	0.4126	0.0324	12.7547
ISS :				
ATS3	0.6942	0.6776	0.0785	8.8409
ATS4R	0.6041	0.6140	0.0883	6.8416
SNS :				
SNS1R	0.3153	0.3150	0.0243	13.0007
SNS2	0.4625	0.4635	0.0296	15.6411
SNS3R	0.3722	0.3714	0.0214	17.3751
PBS :				
PBS2	0.2318	0.2340	0.0259	8.9380
PBS3	0.3312	0.3310	0.0294	11.2567
PBS4	0.2942	0.2970	0.0221	13.3169
PBS5	0.3586	0.3546	0.0384	9.3368
Fairness:				
GF	0.4216	0.3966	0.1867	2.5185
EF	0.2967	0.2749	0.1906	1.7455
HF	0.2764	0.2468	0.1343	2.2642
VF	0.0095	-0.0204	0.1797	0.0573
RF	0.2017	0.1878	0.1521	1.5250
PF	0.0225	0.0235	0.1743	0.1396
AF	0.5130	0.4738	0.1313	4.5815
knowledg:				
GK	0.7904	0.7390	0.1656	5.2486
LK	0.4378	0.3979	0.2261	2.4534
TK	-0.0592	-0.0761	0.2909	0.2470
complexi:				
CT	1.0832	1.0512	0.1820	8.0523
CM	-0.1626	-0.1441	0.2362	0.7243

Outer Model Loadings:

	Original sample	Mean of subsamples estimate	Standard error	T-Statistic
INS :				
(Composite Reliability =	0.904	, AVE =	0.760)	
INS1	0.9340	0.9359	0.0096	97.3731
INS2	0.8289	0.8285	0.0395	20.9855
INS3R	0.8485	0.8500	0.0327	25.9137
AFS :				
(Composite Reliability =	0.880	, AVE =	0.710)	
ATS1	0.8543	0.8529	0.0359	23.8182
ATS2	0.8952	0.8950	0.0172	52.1633
ATS5R	0.7741	0.7720	0.0393	19.7012
ISS :				
(Composite Reliability =	0.742	, AVE =	0.591)	
ATS3	0.8045	0.7903	0.0770	10.4465
ATS4R	0.7308	0.7405	0.0746	9.7924
SNS :				
(Composite Reliability =	0.898	, AVE =	0.747)	
SNS1R	0.7951	0.7934	0.0456	17.4319
SNS2	0.9073	0.9074	0.0127	71.5643
SNS3R	0.8857	0.8844	0.0260	34.0242
PBS :				
(Composite Reliability =	0.894	, AVE =	0.680)	
PBS2	0.8061	0.8034	0.0397	20.2902
PBS3	0.8431	0.8462	0.0271	31.0725
PBS4	0.8722	0.8729	0.0259	33.7339
PBS5	0.7733	0.7657	0.0374	20.6574
Fairness:				
(Composite Reliability =	0.687	, AVE =	0.263)	
GF	0.6028	0.5618	0.1651	3.6505
EF	0.6924	0.6313	0.1405	4.9292
HF	0.2875	0.2684	0.1527	1.8824
VF	0.3611	0.3197	0.1691	2.1349
RF	0.5399	0.4996	0.1428	3.7806
PF	0.2117	0.1893	0.1811	1.1691
AF	0.6703	0.6252	0.1264	5.3029
knowledg:				
(Composite Reliability =	0.620	, AVE =	0.424)	
GK	0.9094	0.8486	0.1181	7.7028
LK	0.6576	0.5971	0.1974	3.3309
TK	0.1128	0.0872	0.2920	0.3864
complexi:				
(Composite Reliability =	0.719	, AVE =	0.593)	
CT	0.9910	0.9701	0.0865	11.4610
CM	0.4516	0.4551	0.1693	2.6671

Path Coefficients Table (Original Sample Estimate):

	INS	AFS	ISS	SNS	PBS	Fairness	knowledg	complexi
INS	0.0000	0.4680	0.0520	0.3450	-0.1590	0.0710	0.0000	0.0000
AFS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0630	0.0000	0.0000
ISS	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0740	0.0000	0.0000
SNS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0410	-0.0290
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3460	0.4200
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (Mean of Subsamples):

	INS	AFS	ISS	SNS	PBS	Fairness	knowledg	complexi
INS	0.0000	0.4658	0.0506	0.3449	0.1610	0.0680	0.0000	0.0000
AFS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0678	0.0000	0.0000
ISS	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0847	0.0000	0.0000
SNS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0489	-0.0341
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3594	0.4178
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (Standard Error):

	INS	AFS	ISS	SNS	PBS	Fairness	knowledg	complexi
INS	0.0000	0.0577	0.0443	0.0513	0.0541	0.0440	0.0000	0.0000
AFS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0956	0.0000	0.0000
ISS	0.0000	0.0000	0.0000	0.0000	0.0000	0.1198	0.0000	0.0000
SNS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0913	0.0838
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0684	0.0807
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (T-Statistic)

	INS	AFS	ISS	SNS	PBS	Fairness	knowledg	complexi
INS	0.0000	8.1173	1.1731	6.7241	2.9396	1.6124	0.0000	0.0000
AFS	0.0000	0.0000	0.0000	0.0000	0.0000	0.6592	0.0000	0.0000
ISS	0.0000	0.0000	0.0000	0.0000	0.0000	0.6179	0.0000	0.0000
SNS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4493	0.3461
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.0569	5.2071
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Scenario 2: Malaysia

```
P   L   S   G R A P H for Partial Least Squares Analysis
            (2004 Feb 27)

     YEAR-MONTH-DAY: 2009-12-29
      HOUR:MIN:SECS: 15:10:31.

====================================
--      P    L    S    X           --
-- LATENT VARIABLES PATH ANALYSIS --
- PARTIAL LEAST-SQUARES ESTIMATION -
====================================
Number of Blocks        NBLOCS =    8
Number of Cases         NCASES =  852
Number of Dimensions      NDIM =    1
Output Quantity            OUT = 2254
Inner Weighting Scheme   IWGHT =    1
Number of Iterations     NITER =  100
Estimation Accuracy        EPS =    5
Analysed Data Metric    METRIC =    1
====================================
 Block   N-MV Deflate LV-Mode   Model
 ------------------------------------
 INS        3   yes   outward Endogen
 AFS        3   yes   outward Endogen
 ISS        2   yes   outward Endogen
 SNS        3   yes   outward  Exogen
 PBS        4   yes   outward Endogen
 Fairness   7   yes    inward Endogen
 knowledg   3   yes    inward  Exogen
 complexi   2   yes    inward  Exogen
 ------------------------------------
           27          Mode A
 ====================================

Real words needed   38673 from 600000
Char words needed    1775 from  40000

Dimension No.  1
Partial Least-Squares Parameter Estimation
Change of Stop Criteria during Iteration
Cycle No.     CR1          CR2          CR3          CR4          CR5

    1  0.9874E+00  0.1221E+00  0.3691E+00  0.2828E+00  0.4809E+00
    2  0.2457E-01  0.1016E-01 -0.1605E-04  0.3092E-03 -0.1329E-04
    3  0.9206E-02 -0.1593E-03  0.7823E-04 -0.1025E-03 -0.1042E-03
    4  0.1675E-02  0.7338E-04 -0.1304E-04 -0.8207E-05  0.3037E-04
    5  0.8722E-03  0.3828E-05  0.5752E-05 -0.9020E-05 -0.1383E-04
    6  0.1378E-03  0.3728E-05  0.2692E-06 -0.1929E-05  0.7468E-06
    7  0.1144E-03  0.8425E-06  0.5702E-06 -0.1382E-05 -0.1699E-05
    8  0.2777E-04  0.4510E-06  0.1435E-06 -0.3844E-06 -0.2048E-06
    9  0.1681E-04  0.1305E-06  0.8408E-07 -0.2173E-06 -0.2429E-06
   10  0.5126E-05  0.6618E-07  0.2901E-07 -0.7020E-07 -0.5814E-07
Convergence at Iteration Cycle No.  10


OB  .. Path coefficients
 ================================================================================
           INS      AFS      ISS      SNS      PBS      Fairness  knowledg  complexi
 --------------------------------------------------------------------------------
 INS       0.000    0.393    0.098    0.394   -0.044    0.080     0.000     0.000
 AFS       0.000    0.000    0.000    0.000    0.000    0.143     0.000     0.000
 ISS       0.000    0.000    0.000    0.000    0.000    0.067     0.000     0.000
 SNS       0.000    0.000    0.000    0.000    0.000    0.000     0.000     0.000
 PBS       0.000    0.000    0.000    0.000    0.000    0.000     0.094     0.029
 Fairness  0.000    0.000    0.000    0.000    0.000    0.000     0.460     0.251
 knowledg  0.000    0.000    0.000    0.000    0.000    0.000     0.000     0.000
 complexi  0.000    0.000    0.000    0.000    0.000    0.000     0.000     0.000
 ================================================================================
```

OR .. Correlations of latent variables

	INS	AFS	ISS	SNS	PBS	Fairness	knowledg	complexi
INS	1.000							
AFS	0.720	1.000						
ISS	0.527	0.494	1.000					
SNS	0.722	0.633	0.535	1.000				
PBS	-0.435	-0.404	-0.427	-0.496	1.000			
Fairness	0.167	0.143	0.067	0.068	0.060	1.000		
knowledg	0.053	0.040	-0.065	-0.024	0.106	0.562	1.000	
complexi	0.125	0.095	0.038	0.004	0.067	0.438	0.407	1.000

Inner Model

Block	Mean	Location	Mult.RSq	AvResVar	AvCommun	AvRedund
INS	0.0000	0.0000	0.6516	0.3299	0.6701	0.4367
AFS	0.0000	0.0000	0.0203	0.2891	0.7109	0.0145
ISS	0.0000	0.0000	0.0045	0.4284	0.5716	0.0026
SNS	0.0000	0.0000	0.0000	0.3454	0.6546	0.0000
PBS	0.0000	0.0000	0.0119	0.3241	0.6759	0.0081
Fairness	0.0000	0.0000	0.3687	0.6652	0.3348	0.1234
knowledg	0.0000	0.0000	0.0000	0.4348	0.5652	0.0000
complexi	0.0000	0.0000	0.0000	0.3065	0.6935	0.0000
Average			0.1321	0.4304	0.5696	0.0835

Outer Model

Variable	Weight	Loading	Location	ResidVar	Communal	Redundan
INS	outward					
INS1	0.4419	0.8889	0.0000	0.2099	0.7901	0.5149
INS2	0.3626	0.7918	0.0000	0.3731	0.6269	0.4085
INS3R	0.4155	0.7703	0.0000	0.4067	0.5933	0.3866
AFS	outward					
ATS1	0.4141	0.9039	0.0000	0.1829	0.8171	0.0166
ATS2	0.4049	0.9026	0.0000	0.1853	0.8147	0.0166
ATS5R	0.3677	0.7078	0.0000	0.4991	0.5009	0.0102
ISS	outward					
ATS3	0.8106	0.8853	0.0000	0.2163	0.7837	0.0035
ATS4R	0.4710	0.5995	0.0000	0.6406	0.3594	0.0016
SNS	outward					
SNS1R	0.4211	0.8493	0.0000	0.2787	0.7213	0.0000
SNS2	0.4413	0.7897	0.0000	0.3763	0.6237	0.0000
SNS3R	0.3736	0.7866	0.0000	0.3813	0.6187	0.0000
PBS	outward					
PBS2	0.3248	0.7842	0.0000	0.3851	0.6149	0.0073
PBS3	0.2383	0.7732	0.0000	0.4022	0.5978	0.0071
PBS4	0.3216	0.8911	0.0000	0.2060	0.7940	0.0095
PBS5	0.3289	0.8346	0.0000	0.3034	0.6966	0.0083
Fairness	inward					
GF	0.2360	0.5683	0.0000	0.6770	0.3230	0.1191
EF	0.0237	0.5304	0.0000	0.7187	0.2813	0.1037
HF	0.0189	0.2446	0.0000	0.9402	0.0598	0.0221
VF	0.2683	0.5507	0.0000	0.6967	0.3033	0.1118
RF	0.4280	0.6566	0.0000	0.5689	0.4311	0.1589
PF	0.3330	0.7376	0.0000	0.4560	0.5440	0.2006
AF	0.2753	0.6334	0.0000	0.5988	0.4012	0.1479

	knowledg	inward					
GK		0.5905	0.8622	0.0000	0.2567	0.7433	0.0000
LK		0.3267	0.6875	0.0000	0.5273	0.4727	0.0000
TK		0.3845	0.6925	0.0000	0.5204	0.4796	0.0000
	complexi	inward					
CT		0.8202	0.9606	0.0000	0.0772	0.9228	0.0000
CM		0.3112	0.6813	0.0000	0.5358	0.4642	0.0000

Output results with Construct Level sign change preprocessing:

Bootstrap raw data generated for Dr. Annette Mills

Number of cases in full model: 852

Number of cases per sample: 852

Number of samples generated: 200

Number of good samples: 200

Outer Model Weights:

	Original sample estimate	Mean of subsamples	Standard error	T-Statistic
INS :				
INS1	0.4419	0.4422	0.0149	29.6535
INS2	0.3626	0.3621	0.0181	20.0800
INS3R	0.4155	0.4162	0.0177	23.5101
AFS :				
ATS1	0.4141	0.4127	0.0123	33.7726
ATS2	0.4049	0.4037	0.0128	31.6080
ATS5R	0.3677	0.3678	0.0190	19.3476
ISS :				
ATS3	0.8106	0.8112	0.0511	15.8499
ATS4R	0.4710	0.4683	0.0661	7.1295
SNS :				
SNS1R	0.4211	0.4225	0.0142	29.7564
SNS2	0.4413	0.4399	0.0176	25.0255
SNS3R	0.3736	0.3751	0.0159	23.4652
PBS :				
PBS2	0.3248	0.3194	0.0257	12.6173
PBS3	0.2383	0.2361	0.0221	10.7894
PBS4	0.3216	0.3279	0.0172	18.7287
PBS5	0.3289	0.3329	0.0208	15.8478
Fairness:				
GF	0.2360	0.2317	0.0706	3.1674
EF	0.0237	0.0252	0.0672	0.3453
HF	0.0189	0.0209	0.0631	0.2903
VF	0.2683	0.2639	0.0678	3.7280
RF	0.4280	0.4186	0.0711	6.0068
PF	0.3330	0.3370	0.0625	5.0359
AF	0.2753	0.2664	0.0642	3.9466
knowledg:				
GK	0.5905	0.5885	0.0668	8.8228
LK	0.3267	0.3169	0.0679	5.1795
TK	0.3845	0.3906	0.0671	5.4932
complexi:				
CT	0.8202	0.8129	0.0675	10.8699
CM	0.3112	0.3164	0.0951	3.0162

Outer Model Loadings:

	Original sample estimate	Mean of subsamples	Standard error	T-Statistic
INS :				
(Composite Reliability = 0.859 , AVE = 0.670)				
INS1	0.8889	0.8886	0.0096	92.1586
INS2	0.7918	0.7879	0.0270	29.3552
INS3R	0.7703	0.7716	0.0248	31.0764
AFS :				
(Composite Reliability = 0.879 , AVE = 0.711)				
ATS1	0.9039	0.9041	0.0115	78.7547
ATS2	0.9026	0.9029	0.0120	75.2690
ATS5R	0.7078	0.7128	0.0281	25.1577
ISS :				
(Composite Reliability = 0.720 , AVE = 0.572)				
ATS3	0.8853	0.8838	0.0333	26.5602
ATS4R	0.5995	0.5915	0.0751	7.9875
SNS :				
(Composite Reliability = 0.850 , AVE = 0.655)				
SNS1R	0.8493	0.8490	0.0142	60.0110
SNS2	0.7897	0.7879	0.0184	42.9936
SNS3R	0.7866	0.7852	0.0244	32.2962
PBS :				
(Composite Reliability = 0.893 , AVE = 0.676)				
PBS2	0.7842	0.7776	0.0269	29.1999
PBS3	0.7732	0.7673	0.0288	26.8872
PBS4	0.8911	0.8899	0.0109	81.8194
PBS5	0.8346	0.8342	0.0208	40.2042
Fairness:				
(Composite Reliability = 0.768 , AVE = 0.335)				
GF	0.5683	0.5649	0.0640	8.8784
EF	0.5304	0.5185	0.0614	8.6414
HF	0.2446	0.2444	0.0650	3.7634
VF	0.5507	0.5444	0.0579	9.5175
RF	0.6566	0.6470	0.0616	10.6669
PF	0.7376	0.7347	0.0396	18.6404
AF	0.6334	0.6235	0.0544	11.6530
knowledg:				
(Composite Reliability = 0.794 , AVE = 0.565)				
GK	0.8622	0.8581	0.0340	25.3940
LK	0.6875	0.6762	0.0569	12.0873
TK	0.6925	0.6966	0.0525	13.1985
complexi:				
(Composite Reliability = 0.815 , AVE = 0.693)				
CT	0.9606	0.9552	0.0251	38.2878
CM	0.6813	0.6821	0.0693	9.8271

Path Coefficients Table (Original Sample Estimate):

	INS	AFS	ISS	SNS	PBS	Fairness	knowledg	complexi
INS	0.0000	0.3930	0.0980	0.3940	-0.0440	0.0800	0.0000	0.0000
AFS	0.0000	0.0000	0.0000	0.0000	0.0000	0.1430	0.0000	0.0000
ISS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0670	0.0000	0.0000
SNS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0940	0.0290
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4600	0.2510
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (Mean of Subsamples):

	INS	AFS	ISS	SNS	PBS	Fairness	knowledg	complexi
INS	0.0000	0.3939	0.0974	0.3933	-0.0435	0.0804	0.0000	0.0000
AFS	0.0000	0.0000	0.0000	0.0000	0.0000	0.1386	0.0000	0.0000
ISS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0724	0.0000	0.0000
SNS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0970	0.0293
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4644	0.2567
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (Standard Error):

	INS	AFS	ISS	SNS	PBS	Fairness	knowledg	complexi
INS	0.0000	0.0412	0.0349	0.0432	0.0284	0.0227	0.0000	0.0000
AFS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417	0.0000	0.0000
ISS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0479	0.0000	0.0000
SNS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0446	0.0463
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0356	0.0371
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Path Coefficients Table (T-Statistic)

	INS	AFS	ISS	SNS	PBS	Fairness	knowledg	complexi
INS	0.0000	9.5345	2.8113	9.1112	1.5472	3.5314	0.0000	0.0000
AFS	0.0000	0.0000	0.0000	0.0000	0.0000	3.4268	0.0000	0.0000
ISS	0.0000	0.0000	0.0000	0.0000	0.0000	1.3994	0.0000	0.0000
SNS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PBS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.1058	0.6265
Fairness	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	12.9232	6.7712
knowledg	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
complexi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Appendix 14

Malay Version of Translated Comments Cited in the Thesis

General fairness

Participant 9
"Itu yang kadang-kadang tu kita quite frustrated juga sebab kita tengok sometimes expenditures yang government belanja tu tak macam yang kita expect la, faham, yang dia buat kebanyakan kita rasa pembaziran…"

Participant 14
"saya duduk dalam jabatan kerajaan, saya tau banyak la kan. Kalau personally memang banyak pembaziran la, kemudian dari segi, apa nama pengurusan tu memang kalau nak ikut cakap, incapable pun ada, how they manage the money, how they allocate duit tu kan, mungkin kalau dari segi keseluruhan budget tu, nampak bagus la pendidikan dilebihkan, kemudian ada pertahanan sikit, kemudian ada SME, perlaksanaan tu, bila duit diagihkan, at the end of the day, kita tak nampak apa dia kan…"

Participant 19
"pendidikan bagi saya belum mencukupi la especially di luar bandar kan, masih terdapat kawasan-kawasan yang masih, bagi saya la, keadaan sekolah tu masih belum mencukupi untuk menampung semua…"

Participant 24
"setakat ni kan kita tak tahu la apa yang kita pendapatan yang kita bayar tu digunakan untuk apa, itu je yang kita tak tahu lah. Tak ada yang dimaklumkan kat mana-mana kan, sedangkan kita tengok ada juga rakyat kita yang daif dan sebagainya, apa peranan cukai tu, adakah disalurkan jugak kepada orang yang kurang mampu ni, ataupun untuk kemajuan je ke, di mana dia gunakan cukai yang kita bayar tu, dekat mana dia gunakan, dimana dia laburkan ke, di mana, kita tak tahu la, itu kurang info tentang tu…saya tak puas hati…"

Participant 4
"saya rasa ramai yang tak tahu yang kerajaan ada kemudahan macam golongan yang tak boleh kerja apa semua. Sebenarnya dia ada punya bantuan dia, kerajaan kat situ cukup prihatin, perlu diwar-warkan."

Participant 9
"saya tak tau how much money they spend untuk yang itu [membantu golongan miskin], kita tak tau, mana ada, tak tau how much money they

spend untuk tu…disclosure tu amat penting, how much dia allocate from income tax, kita rasa puas hati la kan…"
Participant 3
"Dari segi kegunaan [wang cukai pendapatan] tu memang efisien la."

Participant 4
"Saya rasa dari segi keefisienan [penggunaan cukai] tu [memang] ada…"

Participant 25
"Dari satu segi memang adil…I mean sekarang ni kan, setiap pembayar cukai at least termasuk I mesti tahu apa yang dibelanjakan, apa yang digunakan oleh pihak government. Setakat ni kita tahu secara umum lah, untuk pendidikan, untuk whatever ka. Ini tak cukup, bukan tak cukup, I mean tak jelas la."

Participant 29
"Secara terperinci kita tak jelas kan, kita tak jelas secara terperinci kan tapi memang la keseluruhan pendapatan tu untuk negara kan…"

Vertical fairness

Participant 2
"…kalau you punya gaji mahal, memang patut la you dikenakan cukai, kalau gaji kurang, cukai dia kurang la dan ada certain level gaji selepas ditolak deduction, ada yang tak kena [cukai]…"

Participant 3
"System ni memang adil la, maknanya kalau pendapatan rendah tu kebanyakannya tak kena cukai, pendapatan yang tinggi tu cukainya lebih la, maknanya diseimbangkan antara pendapatan yang besar dan pendapatan yang sedikit tu…"

Retributive fairness

Participant 18
"…dari segi penalti, wajar la kalau seseorang tu tak nak bayar, memang kita buat satu mechanism la untuk bagi pembayar tu aware tanggungjawab dia…"

Participant 23
"Penalti boleh diterima pakai untuk menggalakkan orang membayar pada masa yang ditetapkan."

Participant 16
"Yang lambat bayar ni memang patut la pun kita kenakan dia satu penalty tapi tak la sampai membebankan dan menyusahkan mereka la, maknanya mungkin dari segi figure dia ataupun dia punya term and condition kena flexible sikit la. Mungkin diaorang pun ada masalah nak bayar, jadi kita bagi sedikit kelonggaran kepada diaorang."

Participant 10
"…sebenarnya untuk salaried group, dia buat payment on time tapi ada la ketikanya dia lewat sedikit…jadi jangan la kenakan penalty sebab lambat laun pun dia akan settle kan jugak…tapi untuk other group, itu mungkin kenakan penalty sebab diaorang tak ada proper accounting documents…"

<u>Administrative fairness</u>

Participant 1
"Kita tengok STS ni dia let kita yang nak tahu sendiri. Maknanya, kalau dibandar-bandar besar contohnya Bandar besar macam Kuala Lumpur, Kuala Terengganu pun tak semua la, maknanya ada yang educated ada yang tak educated, so maknanya dari segi STS ni kalau LHDN tak push, tak turun padang diaorang memang akan lost macam tu."

Participant 2
"…kita isi borang melalui e-filing kat sini, jadi kita isi, macam LHDN pakai terima je apa yang diisi oleh pembayar-pembayar cukai tu. Dari segi betul ke tak betul ke figure yang diaorang masuk tu, so LHDN tak query la…jadi ketepatan tu tak dipastikan oleh LHDN la."

Participant 15
"Dari segi adil tu kurang adil la, sebab apa yang ada dalam sistem tu kita tak boleh nak query, kita kena ikut saja sistem tu, kalau kita kira dengan cara manual kadang-kadang tak sama dengan apa yang ditaksirkan, jadi itu kita tak boleh nak query."

Participant 18
"…dan sekarang ni dia ada STS tu, once kita log in semua dan send, dia tak boleh, kalau ada pembetulan kesilapan figure kan, kita tak boleh redo, maksudnya kalau kata kita ada salah satu figure kat belakang tu, kita kena bayar dulu."

Participant 8
"…cuma dari segi mungkin dari segi pungutan tu diaorang dah banyak improve tapi kalau kita nak claim balik, itu saya rasa lambat sangat la…"

Participant 15
"Servis di kaunter tak boleh sampai cukup baik la, belum excellent, tapi sederhana la. Dari segi friendly, dia tak friendly la, bila kita tanya tu, dia tak jawab dengan friendly la…whatever fakta yang ada pada dia, dia kira betul la, fakta yang kita bawa dia tak nak terima."

Participant 18
"Dia (sistem pentadbiran] tak user-friendly, and dia kadang-kadang tu kita hantar dua tiga kali pun, dia cakap tak dapat, tak dapat…"

Tax knowledge

Participant 2
"Saya rasa saya tak berpengetahuan sangat la. Saya tahu saya kena isi BE form every year untuk cukai pendapatan individu."

Participant 18
"Bagi saya la, menjadi satu tanggungjawab sebagai rakyat Malaysia kan, kita memang kena bayar la cukai pendapatan yang telah ditetapkan oleh Kerajaan Malaysia…"

Participant 1
"Knowledge untuk macam enterprise, macam ada contoh macam peniaga-peniaga kecil, enterprise, pemandu lori yang bawa lori yang ada perniagaan sendiri, dia memang dari segi tu memang out la, memang tak ada langsung. So kalau tak tak dak sapa ajar memang dia takkan buat. Dia takkan buka buku cukai, dia takkan buka buku fail cukai. Dan dia takkan buat. So memang dari segi tu, memang totally lost."

"…dibandar besar pun, engineer pun, kalau ditanya, saya pun tak tau isi borang tax macamana. Yang dia tak tau, apa, elemen-elemen yang boleh tolak tax, ada rebate, ada insurance, potongan dua kali, dia tak tau, semua tak tau."

Participant 3
"…tidak secara keseluruhan, sikit-sikit je la, tidak 100%, borang BE saya boleh la."

Participant 14
"Saya tak aware tentang penalty tu sebabnya since kita dah boleh comply kan. PCB pun potong, lepas tu bayar sebelum tarikh yang ditetapkan, submit borang cukai pendapatan tu, jadi dari segi penalty tu, memang saya tak ni [tahu] sangat la, tak perasan, tapi tau ada penalty."

Tax complexity

Participant 1
"…kita punya system cukai simple…memang tak kompleks."

Participant 2
"…isi borang tu senang ja sebab dia dalam internet, so kita just fill up the blank and then just follow dia punya procedure je la. Kita just isi-isi apa yang dia nak, then send, kita follow instructions, tak dak masalah dari segi yang tu."

Participant 6
"…it's [the income tax system] not complex actually…for the business may be [complex] la, because untuk business kan banyak pengiraan dia, like apa expense yang deductible, apa expense kena add back; for a company mungkin a little bit macam payah sikit la."

Participant 8
"[sistem cukai pendapatan] memang tak susah. Saya rasa semua orang boleh buat dan boleh faham dan boleh buat terutama orang yang makan gaji, kita dah ada format daripada majikan tu, kita just ikut je, melainkan kalau saya ada business lain ke apa, mungkin susah kan. Tapi untuk orang makan gaji macam saya ni, saya rasa benda tu memang tak sampai 10 minit la boleh siap."

Compliance behaviour

Participant 1
"…dari segi pematuhan saya rasa, ada elemen, semua orang nak elak, maksud saya bukan elak secara betul, elak secara tak betul, dia avoid sebenarnya, dia bukan nak bayar, maknanya kalau boleh tak bayar, dia takkan bayar la. Maknanya bila boleh manipulate, dia akan manipulate..."

Participant 8
"…macam kitorang yang makan gaji ni memang tak boleh lari tapi orang yang macam kerja sendiri atau pun business tu maknanya, diaorang ada banyak cara la yang diaorang boleh lepas daripada tindakan..."

Participant 7
"…saya dapati ada juga golongan-golongan yang bukan berpendapatan tetap macam ahli usahawan, perniagaan pasal mereka ni yang masih LHDN tak dapat nak mengesan diaorang ni. Nampak di mata saya, jutawan-jutawan, usahawan-usahawan yang dia tak bayar cukai, kalau

bayar pun tak setimpal dengan apa yang dia dapat, macam tu, maksud saya…"

Participant 9
"…my relative la dia businessman, saya tanya dia why you buy so many cars, saya rasa tak adil la, car yang dia beli tu bukannya [murah], luxury cars tau, this is under my company dia kata, so I can deduct my expenses, jadi dia driving a very luxury car tapi tolak cukai business dia, kereta besar-besar, 4 biji, semua kereta Mercedes, BMW…kita rasa tak adil la put on their money on…dia guna kereta tu untuk dia, bukan untuk business, claim saja kata kereta tu company punya…tak kena audit…saya punya neighbour cina pun macam tu. Melancong, kan. Melancong tu dia masuk macam dia punya perbelanjaan tau, perbelanjaan under dia deduct nak lari cukai. Kisah benar ni tau."

Participant 2
"…berdasarkan apa-apa yang ada disekeliling saya ni la kan, kawan-kawan yang satu kerja ni, malas nak isi e-filing tu…tak ada kesedaran la sebenarnya..."

"…tauke-tauke syarikat ni, dia mudah [elak cukai], dia memang mudah jugak la sebab dia ada dia punya tax consultant, dia nak tukar sana sini sana sini figure kan…"

Participant 7
"…mungkin [ada yang tak patuh] bukan sengaja tapi tahap kefahaman [berkaitan sistem cukai pendapatan]."

Participant 15
"Pengetahuan dia, pengetahuan dia tak ada tentang tu [sistem cukai pendapatan], tu yang dia selalu lari tu. Pengetahuan dia tak ada la."

Participant 20
"Orang yang tahu macamana nak keluar dariapda cengkaman cukai ni dia memang ada pengetahuan yang tinggi…pendapatan dia tinggi tapi dia tahu ruang-ruang mana yang boleh dielak dan pulak sekarang ni khidmat-khidmat penasihat pencukaian boleh dapat dengan kos yang berpatutan…jadi orang yang ada pengetahuan dia agak culas la untuk mengelakkan diri..."

Tax knowledge, tax complexity and fairness perceptions

Participant 6
"Saya rasa it's possible for those yang tak ada knowledge on tax, dia akan rasa benda ni tak fair, dia akan rasa benda ni macam susah."

Participant 20
"…pendapatan biasanya ditakrifkan sebagai hak kita biasanya la, pendapatan kita kan, atau pun perniagaan, duit kita, jadi bagi mereka yang kurang ataupun sedikit pengetahuan dia, dia merasakan satu bebanan bagi mereka sebab duit yang diaorang dapat kena bayar balik [dalam bentuk cukai]…"